Research Institute
Department of Post-Graduate Studies
Western University Centre
University of San Carlos of Guatemala

Katit-Kamam

Maya Time in Xelajuj No'j

Audelino Sac Coyoy
Ajq'ij maya-k'iche'

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Memoir Series

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Author's Note

The authorship and rights of the ideas expressed in this document belong to the grandmothers and grandfathers, both ancient and close. It is the cultural and intellectual heritage of the Mayan people.

The Ajq'ij who writes, if any merit is attained, is to present these ideas systematically, understandably, and congruently for those who are rediscovering their identity and those who, out of curiosity or necessity, approach the knowledge of the Mayan oral tradition.

The reader is entirely free to assume the truthfulness of the contents, consider them as fantasies, or as stories of magical realism or the fantastic. The intention is to present what the Mayan oral tradition has preserved, taught and practices today.

Corrections are welcome.

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Reimagining Knowledge: An Invitation

In *Tiempo Maya en Xelajuj No'j*, Don Audelino Sac Coyoy Ajq'ij Maya-K'iche beckons us to delve into the intricate tapestry of epistemology and metaphysics, a tapestry that is often torn by the dominant paradigms of modernity. We find ourselves at a pivotal intersection where individualism and rationalism seem to overshadow the collective wisdom from Indigenous Knowledge Systems. Our exploration is not merely a scholarly pursuit but a call to action, a spirited challenge to the conventional wisdom that has underpinned academia for centuries.

This translation was facilitated by Ben Blevins and the ethos of Highland Partners, a network committed to supporting Indigenous research methodologies; we aim to reframe our understanding of knowledge production. This is not about merely allowing voices to be heard; it is about creating a rich symphony of voices that resonate with the earth and its people. This act of translation, reminiscent of a dance, intricately weaves together the stories and experiences of those who have been marginalized, positioning them not as subjects of study but as co-creators in a conversation that enriches us all.

Sac Coyoy's work transcends traditional ethnography; it boldly interrogates the entrenched belief systems of the North that often masquerade as objective truths. Western frameworks' assumed objectivity, grounded in a liberal metaphysical core, privileges the individual experience while disregarding the communal context. However, *Tiempo Maya en Xelajuj No'j* invites us to challenge this narrative by embracing a worldview that revels in relationality—where knowledge emerges from our interconnectedness rather than isolated inquiry.

Through the lens of relationality, we begin to see knowledge as a vibrant ecosystem where every relationship contributes to our understanding of the world around us. This perspective is not only valuable; it is essential. It promotes a holistic understanding that moves beyond the linear, reductionist approaches of yesteryear and steers us towards a place where social, ecological, and cultural dynamics coexist in harmony. Such an understanding is vital for our global community as we grapple with the pressing challenges of our times.

Together, we stand proudly with Don Audelino Sac Coyoy and the innovative educators at Xelaju No'j, forging a path towards a 'Good Life' characterized by relational harmony and communal flourishing. This partnership is not just theoretical; it embodies a practical commitment to educational experiences that validate and elevate Indigenous practices and knowledge. We all have a role

within this transformative journey, and I invite you to engage with our community initiatives.

Our collaboration is a flourishing garden, a space where diverse roots intertwine to foster growth and learning.

By coming together, we can cultivate an environment that promotes both individual and collective well-being, celebrating the richness of our shared experiences. For those eager to join this vital mission, I encourage you to reach out at community@highlandpartners.org. Together, we will nurture a culture of inclusivity and respect, ensuring that our discourse in epistemology is not only broad but deeply rooted in the relationships that bind us.

www.highlandsupportproject.org

Prologue

The book that the Institute of Research, Department of Postgraduate Studies, Western University Centre, University of San Carlos of Guatemala has decided to publish inscribes itself in the millennia-long dialogue about the thought of Mayan culture and civilization, living in the heart of its vast socio-political diversity in Mesoamerica. Despite the events of 1492, known as the “Discovery of America,” and their unfortunate consequences for our cultures across the continent, and in particular, the invasion carried out in Guatemala in 1524, they have not managed to halt the production and continuity of Mayan thought to this day. During the most intense centuries of their persecution, disqualification, and vilification, the most prominent minds in their intellectualism decided to reach the mountains to preserve and spread the ancient knowledge organized around corn.

Few colonial clergy, such as Bernardino de Sahagún or Francisco Ximénez, the first translator of the Popol Vuh from the K’iche’ language to Spanish, attempted to understand the way of thinking of the cultures they encountered. More precisely, archaeological research appears to have begun in the 17th century, when Charles III of Spain ordered recognitions in some of the great cities built by the Maya ancestors. Charles IV was interested in obtaining reports about Palenque. A century later, the works of John Lloyd Stephens, Frederick Catherwood, and the explorations of Francisco Corroy, Alfred Maudslay during the 1800s are known. This was the time when Don Ambrosio Tut, originally from Petén, discovered the Maya city of Tikal.

Furthermore, in the 20th century, the contributions of Eric Thompson, Sylvanus Morley, Michael D. Coe, the extraordinary Yuri Valentinovich Knorozov, and the equally passionate Tatiana Proskouriakoff are recognized. On a national level, with sincere admiration, we remember the dedication, passion, and love for Maya culture of the brilliant and fantastic Rafael Girard, whose work should unquestionably be part of Guatemalan education. Additionally notable are the archaeological investigations of Miguel Orrego Corzo, Mary Jane Acuña, Varinia Matute, and the epigrapher Federico Fahsen, to mention a few prominent individuals.

Perhaps, in the twentieth century, the most significant event occurred in May 1981, when the first version of the sacred book of the K’iche’ib’ was published here in Quetzaltenango by the esteemed master Adrián Inés Chávez. This was the first decolonized version translated from the K’iche’ language into Spanish, titled Pop Wuj, by a Maya originally from San Francisco el Alto, a municipality of Totonicapán, residing in Quetzaltenango. On a sociological note, it is important to emphasize the fruitful research of Dr. Carlos Guzmán Böckler. Each has sought, from different

perspectives and various motivations, to understand or make known the thought that inspires the culture and civilization of corn. In any case, there has always been an extraordinary interest in the "Mayan world".

Currently, there is a stronger determination to elevate, research, and deeply understand the traces of the most distant and nearest ancestors. On an academic level, the coordination of the Master's in Social Anthropology, following a course sponsored under the name "Course of Update for Mayan Time Counters," exemplified the commitment to University Extension. This course was offered virtually to a national and international audience of 60 people, from February to May 2021. Consequently, this slight contact with the reality of Maya knowledge systems inspired the enthusiasm, without which no creative work can emerge, of the authorities of the Postgraduate Studies Department.

They requested the mystic Audelino Sac Coyoy, Ajq'ij Maya-K'iche', to expand on the wealth of knowledge shared during his teaching in the related course through a book he titled "Katit – Kamam. Maya Time in Xelajuj No'j". In this book, he contextualizes the phenomenon of Maya knowledge within the K'iche' society of Quetzaltenango, aiming to facilitate the understanding of human interaction with the universe, time, nature, society, happiness, and well-being proposed by the Mayan cosmovision, sustaining its prosperous path from antiquity into the future. The reader holds in their hands a fertile and inescapable encounter with the contents of Maya culture in its various aspects, as vividly lived by the author during the various stages of his sweet existence.

From his childhood within the bosom of his family: Katit Kamam—our grandmothers and grandfathers, especially with his grandmother Sofia Sajquim Gómez, Ajq'ij -OXlajauj Tz'ikin-; during adolescence in wider circles of young and older people; already in his youth, he built relationships with various practitioners of the day count, mainly the long count calendar, the tropical or civil year calendar of 365 days, and with greater fervor the 260-day spiritual calendar.

Then, almost at the end of his youth, unable to curb his temperament, he suddenly found himself in dialogue with the deepest self of the K'iche' collective soul, undoubtedly deposited in the vast Mayan consciousness, among bees, stars, trees, constellations, flowers, fragrances, mountains, galaxies, birds, fire, air, water, earth, stories, legends, myths, songs, images, icons, which have prevailed for centuries in the Mayan consciousness beneath the superficiality of Western knowledge imposed by colonization.

Strengthened by the pulse of his inner self, he decided to embark on the path of tracing the footsteps of the founders of Mayan culture and civilization. He

discovered that the supposed distant Mayan world, driven by bookish and impersonal visions, devoid of emotions, is found, as in ancient times, within himself, within his inner being, in the bloodstream of his personality. Impressed by such a noble encounter, he sought out the master custodians of ancient knowledge to accompany him on the journey of learning the philosophy and mysticism; the interpretation of symbolism and understanding of spirituality; the understanding and practice of handling the Tzite and various manifestations of the sacred fire, all of which may be the most difficult to perceive, as we know, cultural matters pertain to being, feeling, thinking, and acting. Later, he received the recognition of Ajq'ij with the ability to identify the intangible footprints of Mayan culture and civilization.

Of course, he has intensely walked the abundant Mayan ceremonial centers in Guatemala, visited many homes that have required his presence for the restoration of balance, dreams, aspirations, lost ideals, and cosmic perspectives. Additionally, by mobilizing his individual and collective emotions, capacity, and commitment to Mesoamerican identity, he has continually cultivated the study of codices, the Pop Wuj, the ideology of the K'iche' language, literature, and archaeological contributions of various researchers, always prevailing the contemporary Mayan cultural context.

Precisely this context, where the world of everyday life has nourished his philosophical, ethical, moral, legal, sociological, and pedagogical proposals. His national and international recognition as a Maya scientist is natural, sometimes as a physicist of the spirit or Maya kabbalist, like so many others in various parts of the country, who continue practicing the sustainability of Maya wisdom, its values, criteria, identities, and the ways and forms that support and sustain Mesoamerican identity.

In 1997 he was selected to pursue a Master's in Management for Sustainable Development at the Autonomous University of Madrid and the Chi Pixab' Institute of Quetzaltenango, as a self-taught individual. As a teacher, Ajq'ij Audelino Sac Coyoy has taught courses at the universities of San Carlos of Guatemala, Rafael Landívar, where in 2007 he published his second written work "The Sacred Mayan Calendar, Method for Calculating Time".

As a lecturer he has been invited to universities in Guatemala and internationally in the United States, Mexico, Central America, Spain, and Thailand. With all this vibrant journey, the Research Institute of the Department of Postgraduate Studies and the Coordination of the Master's in Anthropology now publish, as previously mentioned, the book "Katit-Kamam. Mayan Time in Xelajuj No'j", which the author considers an emergence of human interaction in participatory processes in

various community manifestations of Mayan culture, where the common life of the Maya, behaviors, temperaments, and their relentless resilience, solidarity, and ethical duty in the face of threats seeking their extinction or at least their complete invisibility, emerge. Thus, the book in all its content presents moral, ethical, political, sociological, anthropological facets of a society always attached to the anthropic phenomenon, as all human or natural actions are intimately related to the universe. In this sense, for the understanding of the Maya cultural phenomenon in Quetzaltenango, in proposing the search for well-being and happiness for human beings, according to Maya thought, it suggests the recognition of context, the discussion about identity, the main aspects of Maya culture, and the manifestations of its idiosyncrasies.

It also refers to the importance of Maya knowledge in astronomical aspects, calendrical systems, nawales, numerology, ceremonial rituals, timekeeping, philosophical reflection, art, and various manifestations of Mesoamerican tradition, which demonstrate the excellent treatment of the Maya cultural process in contemporary times. It is as if the flourishing of Maya Mesoamerican society, considered backward, not to say savage, by the mentality of Eurocentric colonialism, occurred on all levels and flanks. Precisely, the book Katit – Kamam, Maya Time in Xelajuj No'j, is a significant event that contributes to decolonizing our thoughts, ways of being, feeling, thinking, speaking, smelling, and tasting.

It is hoped that this book, crafted from the experience of the Maya path, will be a significant stimulus to affirm the powerful personality of the millenary cultures of Our America, as well as a new lens to see ourselves in plurinational societies that are part of the aspirations for peace, reconciliation, and the quest for more coherent societies that respect others, their particularities, and specific traits.

Thus, the Master's in Social Anthropology and the Department of Graduate Studies of the Western University Centre, of the University of San Carlos of Guatemala, are committed to vigorously and creatively fostering a love for our millenary Mesoamerican roots, affirming their determination to change the Eurocentric system of truths imposed by the hegemonic European culture since 1524.

Dr. Daniel Matul Morales

Director, Research Institute

Department of Graduate Studies, CUNOC-USAC

Audelino Sac Cayoy

Introduction

The University of San Carlos of Guatemala is the state higher education institution, autonomous, with a democratic culture, with a multi and intercultural focus, linked and committed to scientific, social, humanistic, and environmental development with updated, dynamic, effective management and resources optimally utilized to achieve its aims and objectives, forming professionals with ethical principles and academic excellence.[1]

This is the vision of the University of San Carlos of Guatemala -USAC-. How we wish that the state university, in its teaching, research, and extension work, would incorporate, respect, and coexist with the knowledge of the indigenous peoples of this country. How we wish that in university teaching, ancestral epistemology be known in undergraduate, master's, and doctoral courses, that the curriculum of the different careers would show Maya, Garífuna, and Xinka knowledge. That in history, the indigenous peoples would be known and serve to achieve the fullness of life for Guatemalan society.

How we wish that, in research, the University of San Carlos of Guatemala would be multi and interdisciplinary, evolving Western science with local science, an exchange of new knowledge so that Guatemalan society would achieve the fullness of life with cultural relevance for the majority of its inhabitants. That the extension work of the university would be multicolored, diverse like its cultures. That the people of Guatemala would feel represented by their state university, where history helps generate critical thinking, and to have a science with a multi and intercultural focus.

That is what we wish for, but we do not have it. At the University of San Carlos of Guatemala, in most faculties, non-faculty schools, and regional centers, the knowledge of the ancestral peoples is not incorporated, and most careers do not know it exists. And if they do, they do not value it as such. However, some actions have been carried out, although considered insufficient, something has been done. For example, incorporating the multi and intercultural focus in the vision of the University, which has led to transformations in the central campus of USAC, such as in the very concrete case of the so-called Center for Folkloric Studies.

On July 24, 2019, the University Superior Council in the act No. 18-2019 changed that designation, from "Center for Folkloric Studies" to "Center for the Study of Cultures in Guatemala - CECEG-".

[1] www.usac.edu.gt

In one of the considerations of the aforementioned Act, it is indicated that the name change is due to the limitations of folkloric studies in terms of their meaning, scope, and reaches. Furthermore, folkloric studies are strictly associated with the study of artistic and technical manifestations of specific groups, without considering their complex relationships with their social, economic, political, and cultural environments.

Another interesting action carried out at the central campus is that on the same date of the mentioned act, the name of the “Institute of Interethnic Studies” was changed to the “Institute of Interethnic Studies and Indigenous Peoples of the University of San Carlos of Guatemala.” The act mentions that the Institute must be consistent with the commitments undertaken by the University of San Carlos of Guatemala, allowing the recognition of the fundamental rights and freedoms of indigenous peoples in accordance with the Agreement on Identity and Rights of Indigenous Peoples contained in the Peace Accords, the Political Constitution of the Republic of Guatemala, the United Nations Charter, the Universal Declaration of Human Rights, the ILO’s International Labor Convention 169. Declarations and treaties of similar importance.

It is known that the Institute of Interethnic Studies and Indigenous Peoples of the University of San Carlos of Guatemala, so far in 2021, convened a diploma course on Mayan Worldview. It is also known that in the undergraduate course of Anthropology, in the School of History, two diploma courses on Mayan epistemology were held and there is a push for this knowledge to be incorporated into the courses that make up the curriculum. It is possible that in other programs, professionals have conducted talks, conferences, and panel discussions on Mayan cultural knowledge.

In the Regional Centers of the University of San Carlos that exist throughout the country, efforts are both curricular and extracurricular regarding Mayan epistemology, hoping for the opportunity to incorporate this knowledge into the official curriculum.

At the Western University Centre -CUNOC-, various professors from different bachelor’s degree programs organize talks, conferences, and dialogues on Maya culture. However, in the Social Work program, K’iche’ I and K’iche’ II courses are part of the official curriculum, and additionally, the professor in charge of philosophies incorporates Maya worldview extracurricularly. In the Law program, inter-cycle courses, including one titled Interculturality, are part of the curriculum. The Department of Graduate Studies at CUNOC offers a Master’s degree in Ethnicity, Ethnodevelopment, and Indigenous Law. The official curriculum includes the characterization and situation of Mesoamerican indigenous peoples,

Mesoamerican worldview, epistemological postulates of the indigenous legal system as a legal system, indigenous ethics, and justice administration, among others.

For two decades, the Department of Graduate Studies has offered a Master's degree in Social Anthropology. This program is notable for allowing some students to focus their theses on Maya worldview content. Around 2012, the Master's program and national and international organizations organized a course for young Mayan female leaders, titled Maya Worldview, Matristic Culture, and Political Talent. This course offered a deeper understanding of Maya cosmology. There is an opportunity to redesign the curricula for the Master's degrees in the Department of Graduate Studies at CUNOC, including the Master's in Social Anthropology. This opportunity was utilized to incorporate the Mayan Worldview course into the curriculum. The curriculum was approved by the Graduate Academic Council, the CUNOC Board of Directors, the USAC Graduate Studies System, and the USAC Superior University Council. In 2018, it was offered as an official course of the Master's program. The course program for Maya Worldview indicates the following: "The 2018 academic cycle of the Master's in Social Anthropology, by elevating Maya thought to the curriculum of anthropological sciences, marks a historic milestone in the academic-scientific studies of the western part of the country. It precisely restores the national cultural context in the knowledge of social sciences at the master's level."

The purpose of the course is as follows: "The purpose of the Mayan Worldview course, to be taught during the months of August, September, October, and November of 2018, consists in the search for the traces of the most distant, close, and contemporary Mayan ancestors, to decolonize humanity-nature relations; to generate a dialogue of knowledge in the country's multicultural context."

The methodology contained in the Maya cultural vision called Kabawil (Double Vision), represented by the double-headed bird depicted in a wide variety of huipiles worn especially by K'iche' and Mam women, is assumed. In this respect, the Kabawil method has the virtue of opening fields of awareness from the near to the far; from the far to the near; recovers history, grounds the present, and projects the future; looks upwards (cosmic totality) and downwards (everyday totality); looks inward (implied universe) and outward (explained universe); perceives the environment (context) and the contour (universe); looks to the left, and to the right, backward, and forward; what the open discourse says and the everyday comment."

It is important to mention that the professor of the course has always invited an Ajq'ij to develop some particular points, as they possess appropriate authority

from their experience to explain it, even though the professor has the required knowledge. During the course, the students, whenever face-to-face classes were held, always requested traveling to a ceremonial center and carrying out a Maya ceremony. It was always done when possible.

The Ajq'ij, in one of his interventions in the Maya Worldview course, verbally requested that the Coordination of the Master's in Social Anthropology conduct a course on "Mayan Time Counters," a request that was supported by the students, required by the professor, and authorized by the Coordinator at that moment. A team was formed with the Ajq'ij Audelino Sac Coyoy and university academics to formulate the course, which was finalized and legalized before the CUNOC Graduate Academic Council. The virtual updating course on Maya Time Counters took place on Sundays, starting from January 31 to April 25 of this year. This course was conducted as recognition of the knowledge of the Maya Time Counters. What we are doing is giving life to the vision of the University of San Carlos of Guatemala.

Subsequently, a team of university professionals and the Ajq'ij came together to develop the Doctorate Program in Mesoamerican Studies. This program has already been approved by the Graduate Academic Council of CUNOC, the CUNOC Board of Directors, the Graduate Studies System of the University of San Carlos of Guatemala, and the Superior University Council. The first group of doctoral students will begin in 2022.

With this, we place ancestral knowledge on equal footing with Western knowledge, fostering dialogue and creating proposals to help the cultures of Guatemala achieve a full life for their inhabitants.

It is with great pleasure that we present to you, dear readers, this book entitled: "Katit-Kamam. Mayan Time in Xelajuj No'j," authored by the Ajq'ij Audelino Sac Coyoy. Part of the book's content has been covered in the courses: Maya Worldview, Maya Time Counters, and has served to strengthen part of the curriculum of the Doctorate in Mesoamerican Studies.

This book is suitable for various cultures, different academic fields, and diverse territories. For yesterday, today, and the future, for life.

Moisés Gómez Cortez
Coordinator of the Master's in Social Anthropology CUNOC/USAC

Social Context of Guatemala

Occasionally, I walk backwards:
it's my way of remembering.

If I only walked forward,
I could tell you
how forgetting is.

Humberto Ak´abal

How is Guatemala Culturally?

Guatemala is situated in the center of the American continent, as Miguel Ángel Asturias described, it is the "Christmas Flower at the waist of America," or as the illustrious poet Pablo Neruda wrote:

But you, Guatemala, are a fist and a handful of American dust with seeds, a small handful of hope. Defend it, defend us...

- Fragment from Ode to Guatemala

Territory: 108,889 square kilometers.

Location: situated between the parallels 13° 44' to 18° 30' north latitude and between the meridians 87° 24' to 92° 14' east of the Greenwich meridian. Boundaries: it borders to the north and west with Mexico; to the east with Belize, with the Caribbean Sea or Atlantic Ocean, with Honduras; to the southeast with El Salvador; and to the south with the Pacific Ocean.

Climate: markedly, 2 seasons per year, winter and summer, with varied climates according to the topography, therefore, it can range from warm to temperate and very cold.

Population: the results of the most recent census, XII population and VII housing, conducted in 2018 and officially presented in 2019 by the National Institute of Statistics INE, provide the following perspective:

Cultural Self-identification

The most recent censuses have been characterized by promoting cultural or ethnic self-identification. This means that census interviewers ask individuals to which culture they belong, and the results are as follows:

- Mestizo: equivalent to 56.0%
- Maya: equivalent to 41.7%
- Foreign: equivalent to 0.2%
- Xinka: equivalent to 1.8%
- Garífuna: equivalent to 0.1%
- Afro-descendant/Creole/Afro-mestizo: equivalent to 0.2%

Additionally, two new categories were self-identified in the 2018 census—foreign and Afro-descendant/Creole/Afro-mestizo. So far, there has been no official statement from the State concerning these innovations. It is important to highlight that many Guatemalans and foreigners disagree with the cultural or ethnic results and percentages regarding Mestizos or Ladinos and Mayas, estimating that Mayas constitute the majority of the population. Regarding this, two types of justifications have emerged:

1. Many Mayas, as a consequence of the racism and discrimination existing in society towards indigenous peoples, choose to call themselves “Ladinos” even though their surnames are of undeniable Maya origin. They have undergone processes of colonization.
2. The second reason pertains to the criteria of census interviewers who, based on “their” observation, assign ethnic belonging.

Of the two arguments, the first is considered the more prevalent.

Official Geographical Configuration

From a territorial, political, and administrative standpoint, Guatemala is constituted as a Republic composed of 22 departments: Guatemala, El Progreso, Sacatepéquez, Chimaltenango, Escuintla, Santa Rosa, Sololá, Totonicapán, Quetzaltenango, Suchitepéquez, Retalhuleu, San Marcos, Huehuetenango, Quiché, Baja Verapaz, Alta Verapaz, Petén, Izabal, Zacapa, Chiquimula, Jalapa, and Jutiapa.

These departments are divided into 340 municipalities, with Huehuetenango being the department with the largest number of municipalities at 33, while Izabal is the department with the fewest municipalities at 5. For territorial control and the definition of public policies, the country is divided into 8 regions, each comprising one or more departments as follows:

- Region I: Guatemala.
- Region II: Alta and Baja Verapaz.
- Region III: Izabal, Zacapa, Chiquimula, El Progreso.
- Region IV: Santa Rosa, Jalapa, Jutiapa.
- Region V: Sacatepéquez, Chimaltenango, Escuintla.
- Region VI: Sololá, Quetzaltenango, San Marcos, Totonicapán, Suchitepéquez, Retalhuleu.
- Region VII: Huehuetenango and Quiché.
- Region VIII: Petén.

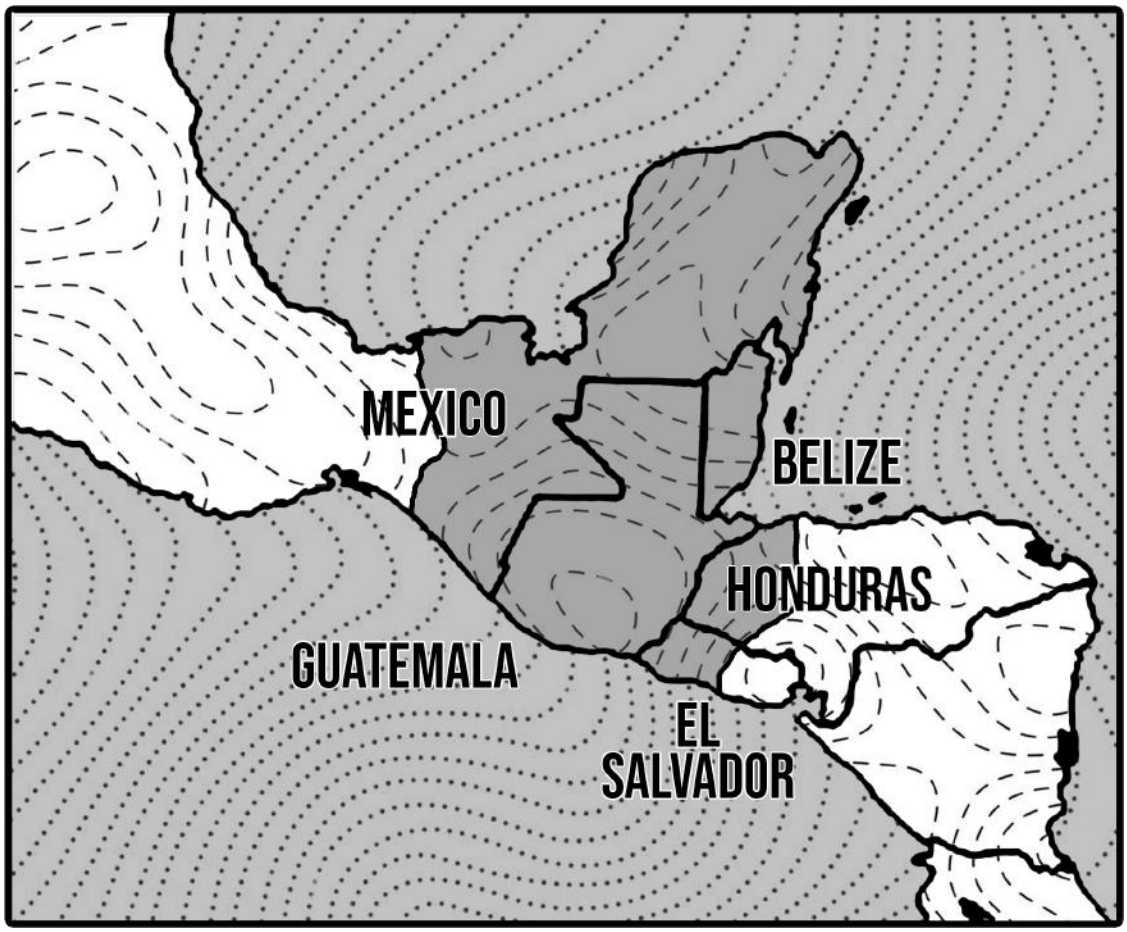
Languages

The linguistic reality is shaped and recognized in Decree 19-2003 of the Congress of the Republic of Guatemala, which in its first consideration prescribes: "That language is one of the foundations upon which the culture of peoples rests, being the main means for the acquisition, conservation, and transmission of their worldview, values, and customs, within the framework of national and universal cultures that characterize the Maya, Garífuna, and Xinka peoples." Consequently, 25 languages are spoken, 22 of Maya origin, Spanish, Xinka, and Garífuna. The 22 languages of Maya origin are: Achi, Akateko, Awakateko, Chorti', Cluj, Itza', Ixil, Jakalteko, Q'anjob'al, Kaqchikel, K'iche', Mam, Mopan, Poqomam, Poqomchi', Q'eqchi', Sakapulteko, Sipakapense, Tektiteko, Tzutujil, Uspanteko, and Chalchiteko, recognized as a Mayan language by legislative decree 24-2003 of the Congress of the Republic.

Maya Culture

The Maya culture is renowned as one of the great civilizations of the world due to its significant development within the geographic constraints it has inhabited since ancient times. Though there's no definitive consensus on the exact dates, Carlos Guzmán Böckler suggested, based on migration theories, that the arrival of the first settlers to what is now Mesoamerica occurred approximately 35,000 years ago. This historical context helps us understand the development of Maya culture, which emerged from humanity's ability to meet their biological and psychological needs, thus cultivating an extensive and complex civilization.

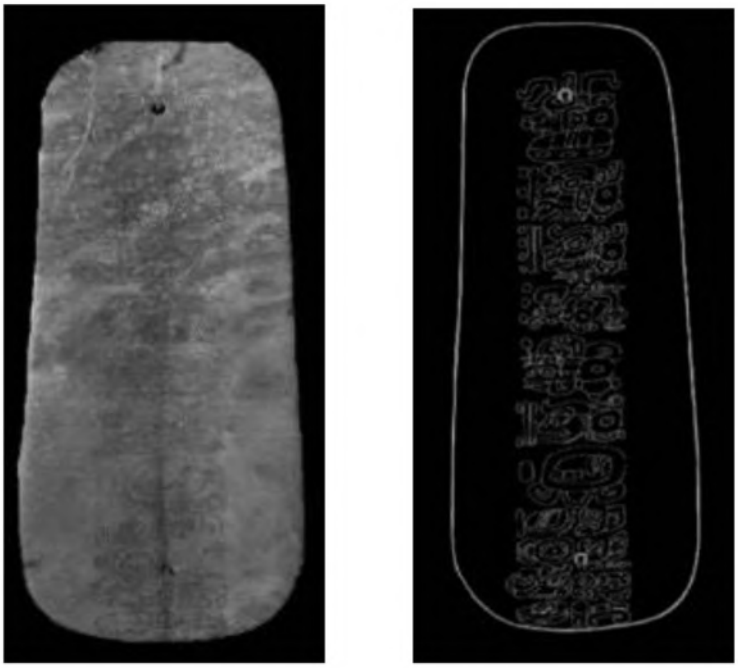
A crucial factor in the creation of any culture is understanding the environment in which human societies are situated. From this understanding and their deep connection with nature stem the actions and relationships that shape their lives and influence future generations. The region where the Maya culture and its descendants flourished is known today as Mesoamerica, encompassing an area estimated to be between 300,000 and 350,000 square kilometers.



So far, there is no consensus regarding the earliest date for recording time in the CHOLTUN (one of the methods of counting time in the Maya tradition). According to anthropological and archaeological sources, the furthest recorded date is from the year 3114 BC., with August 11 or 14 proposed as the start date of the so-called Long Count.

However, in the stories of contemporary Maya Grandmothers and Grandfathers, their oral tradition has imparted the belief that it was in the year 3113 BC. when the Long or Infinite Count began.

Aligned with this perspective, Daniel Matul Morales—a K'iche' Maya—on the occasion of the close of Oxlajuj B'aktun in December 2012, in "The Galactic Cosmic Poem," reinforces the oral history of the ancestors with data contained in the Leyden Plaque. This plaque, found in 1864 in Punta de Manabique, Izabal, Guatemala, details and contains numbers marking the beginning of the count in 3113 BC. and cycles that concluded on December 21, 2012.



Images taken from the Galactic Cosmic Poem

Regarding the criteria prevailing over these dates, it is deemed appropriate to continue investigating without overlooking the main contribution of the oral tradition of the Maya People. It turns out that in both the distant and recent past, the research on Maya culture has been validated according to the investigative

contributions of a generation of so-called “Mayanists,” whom academia recognizes as those possessing the truth.

However, the contemporary Maya have received and learned, within the family and cultural context through oral tradition, a series of cosmogonic knowledge and practices that have been discredited by academia, showing no interest in investigating the foundation of this knowledge, which was, is, and will be useful for the cultural survival of the Maya. This knowledge should be recognized by academia, which still upholds as scientific pillars the knowledge emanating from Eurocentric and “modern” thought, which, of course, belittles the wisdom of the Indigenous Peoples.

Nonetheless, there have been exceptions among some “Mayanists.” We highlight what Raphael Girard said in the introduction to his work: *The Origin and Development of the Ancient Civilizations of America*: “...there are direct sources of American history, written by the indigenous people themselves, but these have not been studied or utilized by research. Much has been said about the Mayas and the American Indians, but they have not been allowed to speak for themselves.”

Quoting Ángel Palerm, then director of the Higher Research Center of the National Institute of Anthropology and History (INAH) in Mexico, Raphael Girard states: “What is needed in the Maya area is a new generation of Mayanists, with new ideas, new methods, and new theories.”

It is worth adding here that those generations of women and men “Mayistas” that Raphael Girard intuited, emerge, live, and come from the deep cultural roots of the Maya, participating as anthropological researchers – though unrecognized. At present, Maya generations across various regions are systematizing and writing about Maya culture from their own experiences; some elders are teaching at universities; many young people are growing, learning, valuing, and strengthening the culture, and countless tender generations of girls and boys are contributing to the continuation of Maya culture.

Despite adverse conditions for strengthening Maya cultural identity, there are areas where identity recognition is strong. Data on the cultural and ethnic reality of Guatemala are presented according to data from the National Institute of Statistics (INE), which, although debatable, are the data recognized as official by the State.

Percentage distribution of the population by department according to town of belonging, 2018 Guatemala Census

Department	Total	Maya	Garífuna	Xinka	Afro-descendant/ Creole/Afro-mestizo	Ladino	Foreigners
Total percentage	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Guatemala	20.2	6.5	23.5	1.3	22.5	30.9	56.1
El Progreso	1.2	0.0	0.9	0.0	0.3	2.1	0.7
Sacatepéquez	2.2	2.1	2.2	0.1	1.8	2.3	4.1
Chimaltenango	4.1	7.8	2.9	0.1	4.5	1.6	2.0
Escuintla	4.9	0.6	4.8	0.1	5.3	8.3	4.1
Santa Rosa	2.7	0.1	3.3	21.1	3.2	4.0	3.3
Sololá	2.8	6.6	2.0	0.0	1.3	0.2	1.3
Totonicapán	2.8	6.6	1.4	0.0	1.4	0.1	0.4
Quetzaltenango	5.4	6.6	3.5	0.1	4.3	4.7	4.6
Suchitepéquez	3.7	3.4	3.3	0.1	12.8	4.1	2.0
Retalhuleu	2.2	0.8	1.3	0.0	2.5	3.3	1.1
San Marcos	6.9	5.1	3.9	0.0	1.8	8.5	2.9
Huehuetenango	7.9	12.3	4.5	0.0	4.7	4.9	2.0
Quiché	6.4	13.6	2.9	0.0	6.1	1.2	0.8
Baja Verapaz	2.0	2.9	1.3	0.0	2.0	1.4	0.6
Alta Verapaz	8.2	18.2	5.8	0.1	4.7	1.0	1.6
Petén	3.7	2.7	2.4	0.1	4.0	4.5	2.5
Izabal	2.7	1.9	15.4	0.0	5.5	3.5	2.4
Zacapa	1.7	0.1	1.8	0.0	2.9	2.9	1.2
Chiquimula	2.8	1.8	4.1	0.0	2.8	3.6	1.7
Jalapa	2.3	0.4	4.3	41.1	2.5	2.5	1.3
Jutiapa	3.3	0.1	4.8	35.7	3.2	4.6	3.2

Image taken from: Results of the 2018 Census INE. Guatemala

The 08 departments where, according to the State, the percentage of the population is predominantly Maya, according to the 2018 census are:

Chimaltenango with 78.2%

Sololá 96.4%

Totonicapán 98%

Quetzaltenango 50.9%

Huehuetenango 65%

Quiché 89.2%

Baja Verapaz 60%

Alta Verapaz 93%

The Maya Culture in the Guatemalan Context

As has been presented, the configuration of the Guatemalan State from its inception was proposed as a Monocultural Republic, attempting to homogenize all inhabitants into a single culture.

Monolingual, by imposing a single language—Spanish—as official, upon which the education system was based, ignoring all aspects related to the existing cultures in the territory.

Monoethnic, by promoting a false unique ethnic identity, under the argument "here we are all Guatemalans," attempting to foster a single nationality, thus making the aspirations of the indigenous nations that coexist in the territory invisible.

This assimilative social dynamic has not been completely successful due to the continuous struggle and defense of cultural identity maintained by the Maya since the Spanish invasion, through the colonial era, and during the so-called independent era beginning in 1821. This period is subject to intense debates about the reality and significance of that historical event.

In this context, education at all levels is situated and does not escape the sphere of professional higher education, where the phenomenon of Maya culture has been addressed from a colonial validation standpoint without taking into account what is contained in oral tradition and cosmogonic practices, deeming them unscientific, lacking in theoretical documentation or explanations from the Maya epistemology perspective, as Eurocentric thought bases itself solely on the rational.

To this very day, Maya thought and sciences are inscribed within the so-called emerging sciences, whose main function is to seek explanations based on the "feelings" of people. This means that they rely on what can only be located within the feelings or "energy" of people and phenomena, producing electromagnetic vibrations that quantum physics attempts to explain, which are contained within the Maya subjectivity.

At present, there is an emerging type of academic "curiosity" about the Maya. A small number of researchers have begun the journey of recognizing, recovering, and teaching the sciences contained in the Maya worldview and philosophy as a complementary part of the theoretical supports of the content grids in some university courses and disciplines, all of this navigating against the current of a system of thought that remains predominantly colonial and colonialist.

Currently, there is an ongoing cultural demand by the Maya themselves for their knowledge, preserved in oral tradition, to be embraced and supported with testimonial and oral sources deeply rooted in pure tradition, generally exercised by elders, despite the condemnation and disqualification imposed by the orthodox, "monoscientific," colonialist, and Eurocentric academia in the past and present.

In the past, academia approached Maya studies by drawing exclusively from researchers and scholars of European, North American, and Asian origin—who sourced their information from Maya oral traditions. At present, there is a significant reliance on Mexican academia as the backbone of knowledge about Maya culture. It is estimated that this foundation should also be supported by contemporary Maya thinkers, who are beginning to be recognized as organic Maya scientists, particularly in Guatemala, where the knowledge of this ancient ancestral culture is preserved, lived, and practiced.

The Cultural Appropriation of the Maya

It is worthwhile to briefly outline the various forms of aggression that the Maya culture has endured for over 500 years, such as biopiracy, commercial registration of glyphs, texts, attire, gastronomy, medicine, and appropriation of images that showcase both tangible and intangible heritage.

This includes countless forms of dispossession or cultural appropriation, which have even reached the extreme of patenting for commercial benefit what rightfully belongs to the intellectual property of the Maya people. Cultural appropriation extends to the commercial registration and copyrighting of research results where the primary sources of information and testimonials have been Ajq'ijab' (time keepers), Iyom (midwives), Ajchay (healers with obsidian), Ajtzib' (those who write the words), Ajqayés (those who heal with plants), Ajpop Kamjá (custodians of the content of ancient documents), and many other contemporary Maya scientists—unrecognized by academia—whose knowledge is "stolen" without them receiving any benefit, while it generates economic profit for those who exploit it immorally or dishonestly.

Thus, Cultural Appropriation is the immoral and dishonest practice by which individuals and organizations exploit ancestral Mayan knowledge to obtain economic benefits for a select few. At the same time, the original sources remain in equal or worse conditions of poverty and exclusion from the benefits their contributions generate. In essence, the usurpers gain economic profit by using Mayan knowledge without promoting cultural appreciation or the dignity of those who have provided the information and knowledge.

This extends to what is known as cultural extractivism, which ultimately aims to benefit from the disappearance of cultural knowledge and practices, seeking to maintain hegemonic alternatives from another culture along with its products, thereby stimulating only the excessive consumption of superficial or harmful products for people, society, and the environment where human beings live.

In this regard, it becomes relevant to address and briefly explain the significance of Maya culture's material and immaterial production as they have in their worldview.

Importance of Culture

In the history of humanity, all cultures have developed systems of values, knowledge, and useful products or items for their lives in full satisfaction of their needs. Anthropology offers countless definitions of culture, as many as there are theorists and thinkers; each presents their understanding and propositions about culture from their perceptions and training.

In this regard, we can observe three main characteristics of culture—although there are others—considered fundamental to understanding the complete concept:

1. **Emerge from the Environment**: Culture arises from the environment where people live and develop, generally within the family setting.
2. **Dynamic Nature**: Culture is dynamic; it does not remain static. It changes and incorporates elements from other cultures, both positive and negative, into its own components.
3. **Behavioral and Normative Frameworks**: Conditions the behavior or actions of individuals to be recognized within the culture so that those who do not conduct themselves according to the established norms are not recognized as part of the cultural conglomerate. Properly, modern Anthropology categorizes two essential elements in cultural production, as each satisfies the needs of human conglomerates: objective culture and subjective culture.

Objective Culture

"Objective Culture," also known as material or tangible culture, results from everything human groups have produced to meet their biological or physical needs. This includes instruments, articles, or material goods that can be seen and touched, i.e., easily identifiable. Examples include gastronomy or food based on what is available in the territory where they live and the resources people have access to for nourishment. Clothing, or apparel to protect against the elements and the environmental conditions they live in, is produced according to climatic, environmental, social organization, and cultural philosophy. Architecture, or the manner of constructing houses, towns, and cities, is linked to their own worldview, geographic characteristics, and the availability of construction materials.

Subjective Culture

"Subjective Culture," also known as intangible or immaterial culture, encompasses all manifestations of "feeling" that fulfill psychological needs. This type of culture cannot be seen or touched, as it does not have a visible or physical substance that can be perceived by sight, touch, or hearing. Intangible or immaterial subjective culture includes all abstract cultural production. Examples are cultural beliefs, such as the concept of "mal de ojo" (evil eye) in the Maya health system, caused by individuals with uncontrolled and overflowing energy. Other examples include myths or cultural stories like the tale of Wukub' Kaqix, which teaches the cultural value of humility—not humiliation. There are also various religions, such as Islam, Judaism, and Christianity. For Maya culture, their philosophy, developed through cosmogonic practices aimed at explaining ultimate reasons, builds their way of life. Although outsiders sometimes assign a religious connotation to it, it remains a unique perspective.

Therefore, we consider that cultural production provides societies with the material and immaterial elements necessary, useful, and available for the construction of a fulfilling life, both individually and collectively, always in harmony with others and useful for the reproduction and maintenance of the history of the peoples.

Maya Cosmovision

One of the cultural manifestations of all peoples and cultures is their way of understanding the world and explaining it to their members. It can be stated that there are as many worldviews as there are cultures in the world.

Throughout human history, all peoples and cultures have developed particular ways of explaining and relating to their environment according to and in harmony with their own perceptions. Therefore, we cannot romantically claim that the Maya worldview is the best; it is simply a different worldview that proposes building “Utz’ Kaslem” (a good life). That is, a fulfilling life and a useful existence.

The worldview of the Maya people is a system of values that interprets, relates, and explains the world, life, things, and time from their own cultural perspective. It also provides an explanation and way to dimension the universe and nature. Through understanding and practice, this worldview connects human beings with all the surrounding elements, visible objects, and energies that are only felt. It is a philosophy of life that fosters material well-being and spiritual fulfillment. This way of explaining the world, life, and things is a cosmogonic, integrative, holistic, and inclusive vision. Currently, it offers an alternative path for building a harmonious society that is respectful and deeply rooted in human freedom.

The value of this knowledge and practice is beneficial for the Maya and anyone who has become aware of the transcendence of human existence. In this view, no one is superior to nature; instead, every human is part of the long biological chain that sustains life, including humans, plants, and animals, in harmonious alignment with the elements essential for life on the planet, such as air, water, earth, and all manifestations of vibration, pulsation, and cosmic heartbeat.

Explaining and theorizing the knowledge of Maya culture is a constant exercise within the community. The purpose of outlining these ideas is to provoke reaction and movement among contemporary Maya men and women so they can rediscover, value, and transmit the greatness of this knowledge to future generations.

Due to the importance placed on oral argumentation of the worldview since ancient and more recent times, a small essay developed many years ago is presented in its entirety below. This essay highlights fundamental elements of the culture and philosophy that our ancestors maintained and theorized from their own capabilities, even in adverse conditions and at the cost of their own lives. The following sections detail each component of the Maya worldview.

The Maya Worldview and Ventura Coyoy

"I see God in the trees, in the stones, in the clouds... I see His hand in the rain that makes our milpas bloom and His breath in the wind that carries away the germs of the plague..." Ventura Coyoy – Ajq'ij maya-k'iche'.

I was born, grew up, and hope to transcend in the ancient Xelajuj No'j, as Agusto Sac Recancoj called it, the first Maya candidate for the mayoralty of Quetzaltenango, from the Xel-Jú Civic Committee (the first indigenous civic-political committee in Guatemala). Xelajuj No'j is a city where most of the inhabitants have Maya-k'iche' ancestry, although latent racism vociferates that the Mayas disappeared thousands of years ago.

The society's particular characteristic is the coexistence in the same geographical space of mestizos or ladinos, Maya-k'iche', and Maya-mam. This has involved, in the past and present, a high index of racism, discrimination, and attempts from different areas to relegate the Maya-k'iche' and Maya-mam to the category of second-class citizens.

In that environment, my mother, María Juana Coyoy Sajquim, grew up in an educational system that discredited and banned cultural elements with all kinds of arguments and fallacies, aiming to force the K'iche' to abandon their culture and assume borrowed or false identities. My mother recounts that when she was in elementary grades in the Ladino system, she was often singled out for her surname—of which we are proud—and received insults such as "the Coyoy are killers" or "Coyoy savage, don't kill me." The insults stemmed from stereotypes against the K'iche' of Xelajuj No'j—Quetzaltenango—linked to two unfortunate events in the city where several people lost their lives.

One of the incidents was the murder of a cattle rancher by a butcher with the surname Coyoy, who was captured, tried, and executed in the city's general cemetery. The other incident involved an AJQ'IJ – a Maya priest – whom the authorities accused of killing three German citizens and two Guatemalans at the summit of Ixkanul – Santa Maria Volcano. My mother narrates this event from oral tradition:

"*The Germans and the other people climbed Ixkanul, and it is said that they destroyed the Tab'al – Maya altars – because they considered them places for performing witchcraft rituals and invoking demons. The inhabitants living at the foot of the volcano, who regarded the Tab'al – Maya altars – as sacred places, climbed up, and after altercations involving punches, gunshots, and machete strikes, the Germans and their guides were killed. The police sought those responsible, and their inquiries led them to question the 'main sorcerer' of the*

area, identifying Ventura Coyoy, a well-known and respected Ajq'ij in the community."

When they went to look for him at his house, he—Ventura Coyoy—had just returned from "jachar" firewood from the communal forest. Upon checking his axe and machete, they found traces of a red sap that oozes from a type of oak tree that is abundant in the region; this was used to present the "blood-stained" instruments as evidence for his accusation.

After several days of torture, Ventura Coyoy died in jail. It was said that he hanged himself or was poisoned with chiltepe seeds that his wife brought him. However, people claimed that he couldn't withstand the torture of his executioners. This story, which occurred during the second decade of the last century—from 1910 to 1920, to be precise, in 1917—was told in oral tradition and linked to my surname, Coyoy, which has impressed my mind.

In 1995, directors of the El Adelanto Society—the last stronghold of the Indigenous Mayor's Office in Xelajuj No'j—requested that in my capacity as an Ajq'ij maya-k'iche', I conduct Le Xukulem—a Maya ceremony—to give thanks for the life and accomplishments of the institution.

We went to the Tab'al – Maya altar – called Xek'ab' near the Zunil tunnel, and afterward, when we finished, they asked me to join them for a cup of chocolate – a traditional Maya drink. To that end, we went to a bohemian-cultural café called La Luna in Xelajú. The characteristic feature of this café is that its tables are decorated with old magazines, newspapers, and pamphlets from the city and Guatemala, covered with a layer of lacquer. The different areas or environments within the café are made up of the rooms of an old house in the historic center of the city.

It is symbolic that the following occurred: we were returning from a ceremony at a Maya altar, where the grandmothers and grandfathers Ajq'ijab'—both those we knew and those only heard about through ceremonial remembrances—are honored. Initially, we settled at one of the tables near the entrance, but a companion suggested, "Why don't we go further inside to speak more freely?" The choice of our seating fell to me, and in the rear of the house, I found a secluded table and said, "There, that's fine." For security reasons and because of the terror we endured during the Guatemalan armed conflict, I instinctively positioned myself with my back to the wall to keep an eye on the entrance.

As I began to observe the table and the old articles that adorned it, something caught my eye, leaving an impression that resonates with me to this day. It felt like an encounter with the ancestors and a profound connection with their wisdom.

Positioned right where I sat was an article written by Carlos Wyld Ospina titled "Twenty Years Ago." This particular magazine republished the article two decades later, emphasizing its significance. Due to the article's importance to Maya culture and the insightful way Ventura Coyoy theorizes the Maya worldview through orality, I transcribe it here verbatim.

A few miles from the city, near our institutes where positive philosophy is taught and our temples where the God of the gospel is worshipped, there lives a strange sect. It is the sect of sorcerers who perform their rituals on the summit of a tragic hill and in the depths of troglodytic caves... at the foot of the volcano, miserable hamlets flourish, thatched huts and cornfields; the familiar, sordid landscape of a regional village. And these places would be perfectly mundane if not for the presence of the congregation of sorcerers, representatives of a mysterious civilization generated by peoples of an immemorial adventure... But what is a sorcerer?

The sorcerer is a kind of augur, a magician. His power over consciences is absolute. The Indian cannot love the sorcerer but fears him as the possessor of miraculous knowledge and supernatural virtue. I have seen the most illustrious sorcerer of the foot of the volcano, who is now locked up in jail. He is an enigmatic man of ambiguous age, virile, like an old athlete, and as grim as a god from his theogony. He wears semi-European clothes, shoes, a felt hat, and a red girdle around his waist. His civil name is a hybrid name: Ventura Coyoy. He moves slowly and swaying like a bear. He looks like a dancing and divining bear. The massive build denotes an elderly man who could achieve longevity; his predecessor, Coyoy asserts, lived over 100 years. The sorcerer must be strong; the current leader of the sorcerers surpasses his countrymen in intellectual stature by more than a century. The Indians call him Tatita.

Here is Ventura Coyoy in appearance. As for the sorcerer, no white man has yet caught him burning copal in the votive brazier. No one outside the congregation has heard him utter ritual prayers in his solemn and guttural language to the God "who is up there and descends, no one knows when, to the summit of the mountain, to the peak of the Santa María volcano – the YXKANUL – of the K'iche': formidable stag-hunter of the skies. Perhaps the imagination of the believers has already seen Ventura Coyoy climb to the top of this new Sinai to hear the word of a deity hidden in the fire...."

Thus is the soul of religions: childlike and grandiose. The sorcerer is more enigmatic than an idol. Indifferent to pain and offerings, knowing what sacrifices and rites are pleasing to his God is impossible. In addition to the recent murder, it is said that travelers never descended from the tragic summit. It is said that, soon

after, the congregation performed a holocaust of a beautiful and nubile young Indian girl. People speak of symbolic dances around an altar amidst the world of copal: the sorcerers leap and howl to appease the implacable God... But the truth is, a bucolic cult of the Aryans in the desert and the clear waters of the Nile, or the excesses of black sacrificers, in the heart of some African chieftaincy, carried out in the middle of an urban plaza, would constitute nothing more interesting than the rites of the aborigines on the shores of Xelajú, atop a towering mountain. The genesis of these beliefs can be found in the Titanic book, Brother to the Vedas, and in the Bible of the K'iche's where an immortal and divine breath passes through.

The Popol Buj, in the depths of the caves, as a final refuge, these anachronistic individuals perpetuate the forgotten liturgies that were born in the jungles and along the banks of the rivers of antiquity... / "There are good sorcerers," Coyoy has said, to the astonishment of his guardians, "and there are bad sorcerers. I belong to the first because I worship the God that is in nature. I see God in the trees, in the stones, in the clouds... I see His hand in the rain that makes our cornfields bloom and His breath in the wind that carries away the germs of the plague (the sorcerer refers to the current smallpox epidemic), but among my companions," he adds, "there are some who worship the God from below, the one that spews fire and hides in the bowels of the earth. They are the bad sorcerers who kill; I do not... / Coyoy expresses himself, then, like a pantheist. But he establishes two types of worship, just as the oldest wisdom of men, the divine and the satanic. And he accuses the black sorcerers... Where is the truth? Can one believe in the words of a sorcerer who is more enigmatic than an idol? How can we prove that Coyoy is not lying with his Indian cunning and stoic strength? This is what the judges and the discreet think, and, before the corpses of the white men sacrificed on the altar of sacrifices, under the dark and desolate night, the people roar and cry for revenge... / and yet, who knows! -end of text-.

Colophon:

From my perspective, the story and the previous text have a purpose that can be expressed from several domains: Nabé Tzij –first word-: Grandfather Ajq'ij Ventura Coyoy theorizes the Worldview and Spirituality of the Maya People in simple, sweet, tender, and loving words towards Ajaw –Mother and Father- and Nan Ulew –mother earth- that have transcended the years –almost a century-. This is something that organic Maya intellectuals have recently done without knowing the written words of the Grandfather but heard in the family oral tradition because the worldview and Spirituality have been preserved within the family, often

clandestinely due to the religious, educational, cultural, and philosophical disqualification that Maya cosmogonic practices received from the church, education, ladino society, and the ethnocentric Guatemalan state.

Uk´ab´ Tzíj -second word-: Wyld Ospina, an emerging writer at the time of the events –later an important man of letters–, was able to cross the line of prevailing racism –which still persists, albeit with less intensity– and write with some objectivity about what was narrated by Grandfather Ventura Coyoy.

In recent years, Dr. Marta Elena Casaus Arzú delivered a lecture at Rafael Landívar University about the movement and involvement of Guatemalan men of letters in Theosophy and how they transcended politically; one of them was Carlos Wyld Ospina, and from this, one can understand the mental and intellectual openness of the writer when translating the words heard in the interview conducted in the Quetzalteca jail, whose building is currently the House of Culture of Quetzaltenango.

Urox Tzij –Third Word-:

The narrative perpetuates elements of the Maya Worldview and Spirituality; furthermore, it links current elements of the cosmogonic practice of the Maya People, such as the Tab'al –the Maya altar– located at the summit of Ixkanul –the Santa María volcano– and the respect for Grandmothers and Grandfathers when mentioning that "the Indians call him Tatita" and that nowadays elderly people are still called Nan –mother– and Tat –father–. The text also identifies Le Pas –referred to as a band in Spanish– by describing the use of a red sash at the waist, a ceremonial element still used by the Ajq'ijab' and, by its particular way of tying it around the waist, evokes Q'uq'Kumatz' –the plumed serpent– and serves to balance the physical energies of the Ajq'ij; likewise, the Zut Rejolomaj –the ceremonial headscarf or serviette– is "tied to the head" to balance the spiritual energies when performing the Xukulem or Maya ceremonies –also mentioned therein.

At present, many Ajq'ijab' who know the history of Grandfather Ventura Coyoy invoke his nawal and "place" his offering during our ceremonies, saying:

Kukam ru Nawal re Qatat Ventura Coyoy... Once... twice... thrice... and four times... Thank you... Come to receive the Nawal –or spirit– of our Grandfather Ventura Coyoy... once... twice... thrice... and four times... thank you for your word.

This text has been written at the request of Marta Elena Casáus Arzú and represents a token of love and gratitude to the woman who has walked with us… on the flat paths… on the clear paths… on the paths of fatigue… and also on the climbs and in moments of darkness.

Audelino Sac Coyoy
Ajq'ij Maya-K'iche' Xelajuj. Nój belejeb' Q'anil. Quetzaltenango.
Nine seed day in the sacred Maya calendar.

The previous story briefly presents and explains, through the words of Grandfather Ventura Coyoy—of whom, unfortunately, I am not a relative—a series of important elements contained in the Maya worldview set forth from the feeling and practice of cosmogonic traditions. It is pertinent to note that the words of this grandfather have laid the foundation for the current theorization of the Maya worldview when Carlos Wyld Ospina, upon interviewing him and asking, "Why do they say that you are a sorcerer?" he responds, "Because I worship the God that is in nature. I see God in the trees, in the stones, in the clouds… I see His hand in the rain that makes our cornfields bloom and His breath in the wind that carries away the germs of the plague (the sorcerer refers to the current smallpox epidemic)."

The organic Maya academics have theorized the Maya Worldview in the present, and one of these theorizes says:

"*It is the practice of a system of values that relates and explains the human being, nature, time, life, and things as a totality of relationships that define the essential characteristics of a living system: The Cosmos. This relationship, necessary for society's material and spiritual development, fills our spirit and gives fullness to our bodily well-being since all things are observed as a whole. That whole is inscribed within even greater wholes.*"

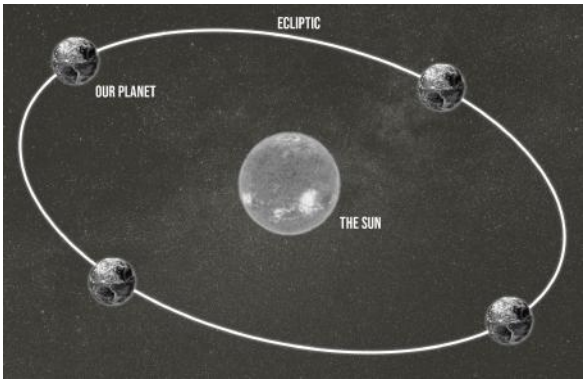
Astronomical Theories: Geocentrism and Heliocentrism

The history of humanity records that many peoples constructed their cultures based on the initial validation of their religiosity or the recognition of divine intervention in everything, and from that recognition, they validated *their* science. An example of this is the theory of geocentrism, which, inspired by Claudius Ptolemy and grounded in the theories of Plato and Aristotle, argued for the immobility of the Earth, that is, the Earth as the center of the universe in a system wherein everything revolved around it.

Christianity also adopted this theory, and with these foundations, the Spaniards arrived during the invasion of America. These theories were later debated and amended by scientific-astronomical contributions proposed by Nicolaus Copernicus, then by Johannes Kepler, and subsequently demonstrated by Galileo Galilei, who posited the heliocentric theory. This theory became famous for the phrase Galileo pronounced when judged by the Catholic Inquisition concerning the Earth: *E pur si muove—nevertheless, it moves*.

Contrary to the above, in Mesoamerica, the Maya culture held the idea of the sun as the center of the system, and this is contained within the galaxy where planet Earth is located. This understanding emerged from observations that can now be recognized with "scientific rigor" and through research dynamics involving systematic observation and patient recording of results often conducted over several generations of astronomers. These practices, built upon scientific arguments, were part of their cosmogonic practices, or what some currently mistakenly call the "Maya religion." As previously mentioned, describing it as a philosophy of life is more accurate.

From observing the apparent movement of celestial bodies, periods of light and darkness, cycles in nature, and favorable and adverse times, they systematized the time covering the transit of the Earth around the sun, establishing a year of 365.2420 days.

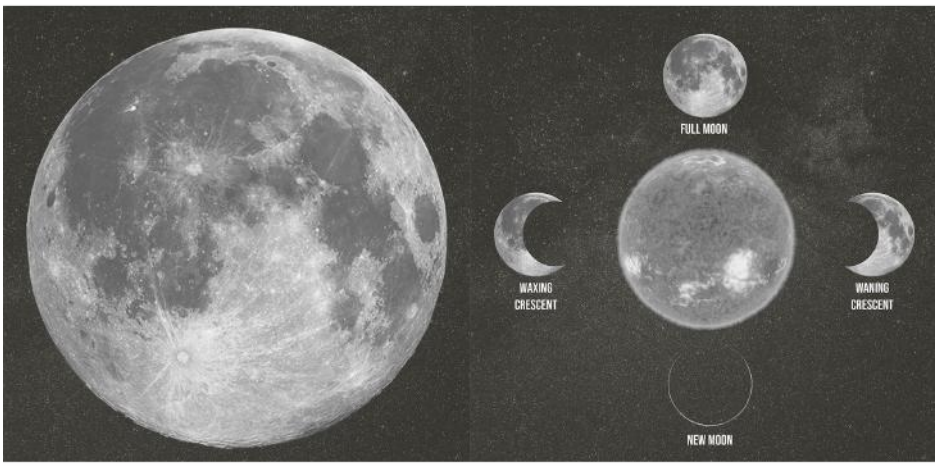


In the present day, using high-tech instruments, the Earth's orbit around the sun has been established at 365.2422 days. According to scholars, this difference of 2 in the seventh decimal place amounts to two ten-thousandths of a day. In other words, if the 24 hours of a day were divided into 10,000 parts, the Maya astronomers had a discrepancy of two parts out of the ten-thousand parts of the day.

In line with what has been stated, when it comes to minimizing the scientific contributions of the Maya, one often hears, "The Maya were wrong!" In this regard, contemporary Maya explains that the Earth, throughout billions of years of its existence, has lost speed in its heliocentric orbit; therefore, the measurements made by their ancient Maya astronomers will continue to change over thousands of years into the future.

From the scientific rigor of physics regarding the Earth's speed in its orbit, it is estimated that, as we advance, it will lose speed. We are speaking of the astronomical foundation of Nan Ulew's—Mother Earth's—transit around the sun. Around this astronomical appreciation and representation, a series of cultural manifestations have been configured, as will be explained later, since it holds profound significance for the life of the Maya people.

The same graphic figuration is performed by WATIT—Grandmother Moon—around the Earth. For this reason, much of the symbolism of the Maya culture, geometrically speaking, represents ellipses, astronomical circles, cosmic circles, quadrangles, and rhombuses



***WATIT**—our Grandmother Moon—and her orbit around the Earth.*

Maya Reason and Sentiment

One of the main obstacles to recognizing the values and contributions of the Maya worldview to society is the divergence that exists between the rationality of the dominant thought—in levels of training and official education—supported by Eurocentric anthropocentrism, which prevails in almost the entire world.

This anthropocentrism validates the supremacy of man over nature, which we consider to be a mistake, as in the 21st century it has reached a high level of crisis, placing our planet and its inhabitants on the brink of global collapse. Living according to these unfortunate directives only promotes excessive consumption and the depredation of all areas where large numbers of people live. Precisely, it is within the course of this way of thinking that generations of human beings have grown, since the onset of the so-called "industrial revolution" approximately 300 years ago, or a bit more, significantly threatening other beings in nature: plants, animals; and elements such as water, air, and land that we have plundered and polluted without any restraint or measure.

The consequence of anthropocentrism and its excessive consumerism is most promptly evidenced in the societies of the so-called first world, where educational systems based on rationalism solely focus on promoting the accumulation of material goods and the appropriation of territories at any cost, including violence, displacement, and the extermination of other beings. The type of "happiness" it promises consists solely of achieving material satisfactions, leading to the irrational aggressiveness of the consumer market. Its consequences, primarily in first-world societies, are high levels of emotional crises, stress, depression, psychological problems, and suicides across all generations. There is no doubt that the privilege of materialism replaces the cultivation of the spirit, drowns the balance between the psyche and the physical body of individuals, and hinders harmonious relationships with the universe.

Precisely distancing from anthropocentrism, Maya culture promotes the balance between the rational and the emotional. For example, in ceremonial discourse and protocol, as a cultural practice, the grandmothers and grandfathers, when "blessing" their family, light their candles or incense while expressing:

"*May your body be happy and content... but may your heart also be happy and content.*" This can be interpreted as a search for a harmonious balance between the rational and emotional parts by promoting well-being in both the body and the heart.

One example of the aforementioned, which should make us reflect on the condition that we are part of the whole and not its owners, was evident during the recent coronavirus pandemic that forced governments and countries to "lockdown" their inhabitants in their homes.

In contrast, and without threats, animals returned to their natural environments that had been taken from them and from which they had been displaced. It was evident and gratifying to see, for example, marine creatures approaching beaches without feeling threatened. Forest animals occupied empty urban centers, and birds sang again in the cities. Likewise, nature in all its magnitude flourished once more: rivers ran clean, and the air returned to its original purity, while humans were concerned about not falling ill and dying.

Therefore, the sentimental part should not be separated from the physical part, because both constitute a unit necessary for the perpetuation of humanity under conditions different from the imposed hegemonic thought, which solely sanctifies production and profit.

In Guatemala, the devaluation of the values that guide the Maya worldview is related to disdain, misinformation, ignorance, and the limited dissemination that the official system promotes daily, without reflecting on the fact that their attitude contributes to maintaining a sort of chronic ignorance about other ways of constructing UTZ' KASLEM— the good life—which allows for living life to the fullest. Such a philosophy of daily intervention is not solely a Maya heritage; its practice, according to their context, also includes other ancient brotherly peoples of the continent.

Unfortunately, all these philosophies are currently considered a "hindrance to development." Despite the adverse conditions for the reproduction of culture in this country, Maya and indigenous cosmogonic practices, in general, continue to shine with their own light amidst the darkness imposed by European rationalism.

We have not given up on continuing to harmonize the cosmos with our spirits, physical bodies, and nature. We are well aware of our alternative in the formation of healthy, necessary, and urgent societies, which curiously coincide with the postulates that inspire the change of era across the planet, filled with hope and a high projection for the future of humanity.

This conviction of thought and feeling has deep roots, as it emanates from the holistic Maya foundation that establishes and guides the premise that everything has life and that life deserves to be respected. Now remains the task of restoring, from the Maya scientific perspective, the dimension that values reason and recognizes the significance of sentiment for life.

We refer to the indivisible unity of both fields, which has been prejudiced, undermined, and disqualified by academia and the State in their various systems of constructing and transmitting colonizing and religious knowledge imposed since the Spanish invasion up to the present day.

Maya Food System

The so-called Mesoamerican triad: Corn, Beans, Squash and Chili

Corn, one of the three main cereals in the history of humanity, currently constitutes the vital dietary alternative for humans and animals. Since ancient times, it has sustained populations alongside wheat, cultivated by the Egyptian culture, and rice, cultivated by Asian cultures, providing accessible food options for the global population.

“Ixim” or maize is the main element in the diet of the Maya, but it is also a support for spiritual life and a philosophical explanation of the collective and individual acts and representations of the population, with its own scientific arguments.

In various Maya languages, IXIM means maize; this sweet word’s ontological and epistemological foundation is IX = young mother-woman. IM = breast, bosom. By explaining the word IXIM, we are saying the breast of our mother earth because this young mother feeds us with the sacred maize.

The existence of loq'ojaj ixim - sacred maize - dates back to immemorial times and is present throughout the life of the ancestral and current Maya. In the myths written in the Pop Wuj or Popol Vuh, we find references to its "appearance" or emergence.

The story of Ixmukane and ixk'ik is vividly related to the cultivation of maize. The mentioned myths recount the greening of maize stalks in Grandma Ixmukane's yard as a sign of her grandchildren's life, and the harvest of abundant corncobs by Ixk'ik denotes a particularity, which has been little explored until now: the participation of women in the procurement of food for society.

The Pop Wuj recounts that maize came from Pan Paxil – Pan K'ayala', brought by four animals: yak, mountain cat; utiw, coyote; k'la, parrot; joj, raven. It also mentions that to create human beings, Grandmother Ixmukane ground white and yellow corn cobs nine times. Maya oral tradition says that: "white maize entered the bones of the people... yellow maize entered their flesh... black maize entered their eyes and hair... red maize entered their blood."

The names of the first ancestors were B'alam K'itze', jaguar of the sweet smile; B'alam Aq'ab', jaguar of the dawn; Majuk'utaj, the one who needs nothing; and Iq' B'alam, jaguar of the moon or the wind.

The first four grandmothers were Kaja' Paluma' water that comes from the sky; Chom Ja' water that is settled; Tzununija' home of the hummingbird; Kakixaja' home of the macaw. The Pop Wuj and oral tradition teach that it was from maize that Le Winaq, the people, were formed.

Now, in terms of so-called sustainability and food security for human beings, the Maya agricultural system provides the food for the people, with the necessary elements for a healthy diet and, it teaches from nature, respect for Nan Ulew - mother earth - in caring for natural resources and harmonious coexistence between human beings and their environment.

The contribution of this food system can be explained through the agricultural elements that configure it, both in its cultivation and its ethical, mystical, and scientific significance. Its nature is expressed throughout the Mesoamerican territory around Ab'ix, the milpa, from which comes the estimated framework for the nutritional emergence of a healthy life. Its contributions can be estimated in the following manner:

Maya Nutrition

Ixim, or maize, is the primary source of carbohydrates, a cereal with high contents of starches, proteins, and vegetable fats; potassium, phosphorus, and magnesium. These are essential energies for living. Furthermore, it is complemented by the so-called "nixtamalization." This process involves cooking maize with lime to soften the grains and enrich the dough with calcium, which is used to prepare a vast variety of foods and culinary delights.

Q'inak, bean. A legume and a source of vegetable protein, it provides the body with dietary fiber and iron, aiding in food digestion. Additionally, it helps maintain healthy muscle mass. The Maya diet is perfected with the protein provided by the meat of domesticated animals.

Mukum – Ik, ayote, and chili are vegetables that provide vitamins, mineral salts, and carotenoids: their consumption prevents cancer. In addition to enhancing nutrition, their toasted seeds constitute healthy "treats" that supply the body with vitamins and mineral salts. The particularity of chili is that it regulates insulin and cholesterol levels.

With this agricultural system, the Maya civilization sustained itself nutritionally since ancient times. The teachings fostered by the ancestors persist in the ethical and philosophical reflections of contemporary generations and surely those yet to come.

Specifically, its cultivation is not possible without respecting Nan Ulew, mother earth, of whom no one is the owner, only temporary inhabitants. Therein lies the key to the conservation and sustainability of natural resources, which we understand according to the guidelines revealed below.

Ecological Awareness of the Maya

Ab'ix, the milpa, has the natural capacity to extract nitrogen from the soil. Initially, modern agronomists' assertion that indigenous practices "kill the earth" by planting only maize seems appropriate. However, this perspective overlooks a crucial point: maize is often grown alongside the three essential foods previously described. Thus, when planted solely, maize depletes nitrogen from the soil, leading to potential harm.

Therefore, in the original and authentic Maya cultivation system, maize is not planted alone because it degrades Nan Ulew, Mother Earth. Qinak, the bean from the legume family, excellently concentrates nitrogen through an absorption process explained in biochemistry. The atmosphere is composed of 78% nitrogen.

Through its leaves and stems, the milpa absorbs nitrogen from the air and deposits it in its deep roots via nodules or round masses that, when dissolved, return this surprising mineral nutrient to the earth. This has the greatest effect on the milpa's growth, creating a natural fertilization cycle. Poetically, it is said in Maya oral tradition that the bean grows embraced by the milpa.

Mukum, squash or cucurbits are creeping plants whose particularity is that they neither choke nor degrade other crops. Their broad leaves prevent erosion, serve as a natural buffer for raindrops, and enable the natural hydration of the soil, as their leaves produce the gentlest water runoff. Moreover, with their shadow, the leaves block the photosynthesis process in the soil to prevent the germination of harmful plants whose seeds have been dispersed by the wind. Photosynthesis allows plants to take energy from the sun and convert it into chlorophyll, which is necessary for their growth.

The previous agricultural system is a display of scientific processes inherent to the Maya culture, complex yet simple to explain and easy to apply, to bring to life the cosmogonic vision in which we are all part of the whole. This system demonstrates what human beings have not been able to learn from Uwachulew, or the face of nature, to live harmoniously and help us achieve Utz' Kaslem, the good life.

Specifically, these practices surrounding maize cultivation, which continue to be practiced today, further illustrate the teachings generated by the Maya cosmovision—like many others, of course, related to philosophical explanations for healthy family and social life.

When sun-drying maize here in Xelajuj No'j, a square formed by four triangles was created. In one triangle, Saq Ixim, white maize, was placed; in another, Q'an Ixim,

yellow maize; Q'eq' Ixim, black maize, in another; and more with Mulko maize—which did not germinate well or was moldy—to feed the household animals. In the center, Q'aq' Ixim, red maize, was placed, and offerings of Kopal Pom, candles, and incense were made as a gratitude to U'Kux Ixim, the heart or spirit of the maize. Today, the Maya flag features the four colors of maize cultivated in Mesoamerica, with blue and green in the center.

After the harvest, the family looks for the Pichol, which refers to the ears of corn that were left behind during the collection, with the elders' warnings: "always leave some ears of corn for the animals of the field or for people who cannot plant their own." This signifies being compassionate towards the animals and thinking about those who do not have means for their sustenance.

Q'ANIL, or maize seeds, are preserved from harvest

Four Paths and Four Colors

The colors of maize are deeply embedded in Maya life and cultural representations, inspiring the philosophical and cosmogonic thought of the people. One of the historical myths of the culture talks about the convergence of the four paths. The Pop Wuj narrates that Junajpú and Xb'alamkej "arrived at the four paths... but they knew which path led to Xib'alb'a."

These paths and their corresponding four colors hold profound significance in contemporary cosmogonic practices. Simple explanations reveal the deep philosophical content that each color represents for the past, present, and future lives of the Maya.

Q'aq' B'e, the Red Path, is represented and located in the direction where the sun rises. It symbolizes life, energy, light, and clarity. This inspiration comes from identifying Ri Q'ij (the sun) as the primal source of energy in the galaxy, where planet Earth is situated in the infinite.

Q'eq' B'e, the Black Path, is located and represented on the side where the sun sets. It classifies rest, darkness, and the recovery of physical and emotional strength. It also personifies death, but not as the end of everything or a conclusion. Rather, death is seen as a necessary step for transcendence to another energetic or spiritual level. Hence, it is said, "our dead do not leave... they remain with us and accompany us from another dimension."

Q'an B'e, the Yellow Path, marks the right "arm" of the cosmic quadrangle, which can be located in the southern direction. It represents the things that we can see and touch, the material world, what can be perceived with our senses and is visible. It satisfies our biological needs and is known anthropologically as objective, material, or tangible culture.

Saq' B'e, the White Path, points to the "left arm" of what is indicated among the Maya as the northern direction. It symbolizes the universe's electromagnetic currents, what we cannot see or touch, what is not visible, such as the wind, energy, and our spirit, which is not visible but can certainly be "felt."

In the explanation of the Maya cosmovision, the four colors, red, black, yellow, and white, symbolize the colors of Loq'olaj Ixim, the sacred maize cultivated in the Mesoamerican territory. The particularity of Q'aq' Ixim, or red maize, is that it is not planted but grows spontaneously in the fields of A B'ix, or milpa. As an ontological interpretation, its meaning is sacred because, as the elders say, "red maize is the Ajis, or spirit, of all the maize that Nan Ulew, or Mother Earth, gives us."

In the explanations about the colors of maize, the elders also say that these four colors are the skin colors of the human beings that inhabit Uwach' Ulew, or the face of nature.

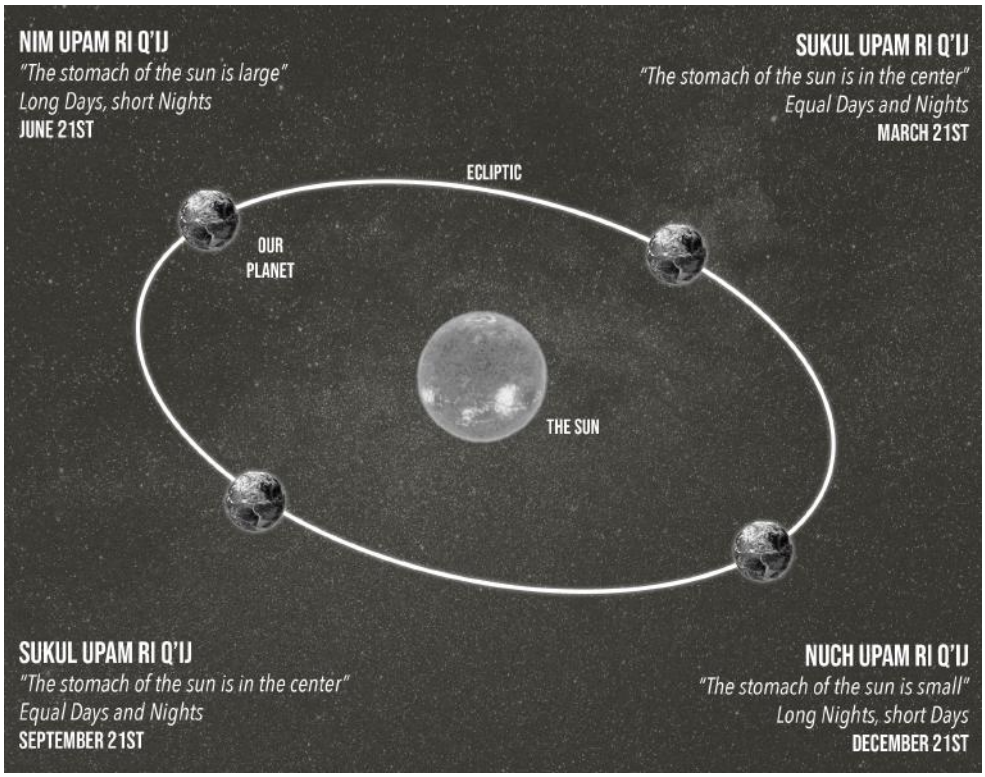
Maya Astronomy and Philosophy

Maya astronomy is deeply embedded within the application of the movement of celestial bodies and the influence these movements have on life—not only the physical and emotional well-being or psyche of humans but also for animals and nature.

Through patient observation and recording of the changes that each movement of the sun, moon, stars, and natural phenomena create, it was found that the various periods in their multitude of interactions generate, influence, or determine favorable and adverse cycles for human life and nature.

From their own cosmovision, masculine energy was assigned to the sun. It is said in oral tradition that the sun is “man.” From the position of terrestrial observation, this mighty star appears to revolve around the Earth. However, these movements are merely appearances. It is the Earth that moves around the sun, following a path known as the solar orbit. The sun, too, does not remain static; rather, its continual movement is carried out by “chasing” the constellation of Hercules.

The following diagram illustrates the Earth’s movement around the sun and is explained through Mayan astronomical arguments.



Four Positions of the Earth Around the Sun

General Astronomy

General astronomy details that the Earth occupies four positions during a cycle of approximately 365 days, completing one full orbit around the sun in an elliptical or oval trajectory.

For centuries, European astronomers attempted to "adjust" the time of this orbit. By 1580, this method of timekeeping had already resulted in a discrepancy of ten days, despite the existence of the leap year. To correct these dates that had fallen out of sync with their calendar, they decided to "suppress" ten days, so that October 4th, 1582, was immediately followed by October 15th, 1582, effectively canceling out those ten days to "adjust time."

This adjustment required European astronomy to correct the so-called autumn and spring equinoxes and the summer and winter solstices. Today, when explaining these positions of the Earth in its orbit around the sun, most people do so from this Western astronomical perspective. This led to a question among the Maya: Did the Maya knowledge about these positions of the Earth get lost?

It is essential to highlight what Daniel Matul Morales noted: "Maya knowledge has not been lost... it has only been misplaced." This statement is extremely valuable because, often, it is said that Maya knowledge has been lost. What Matul Morales pointed out guides the search for answers within the same culture. It means that there is a need to reconsult, re-question, learn, systematize, and document what the grandmothers and grandfathers have preserved in oral tradition.

In the early years of the current century, during the development of the Diploma in Journalism for Development, attended by young women and men from various Maya linguistic communities, there emerged an investigative zeal to find out if these four positions were still discussed in communities from the Maya cultural perspective.

Coordinated by the facilitators of the Maya Cosmovision module, the students of the mentioned diploma, all of Maya origin, along with an anthropologist and an Ajq'ij, set out to return to the roots and consult the ancestors. The result of weeks of anthropological, linguistic, and oral research, and after interviewing elderly co-researchers, the following information was recovered, validated, systematized, and documented:.

At the two times when the Earth is closest to the sun in its orbit, approximately on March 21 and September 21, it is called in the K'iche' Mayan language, Sukul Upam Ri Q'ij. Etymologically, the expression literally means "the stomach of the

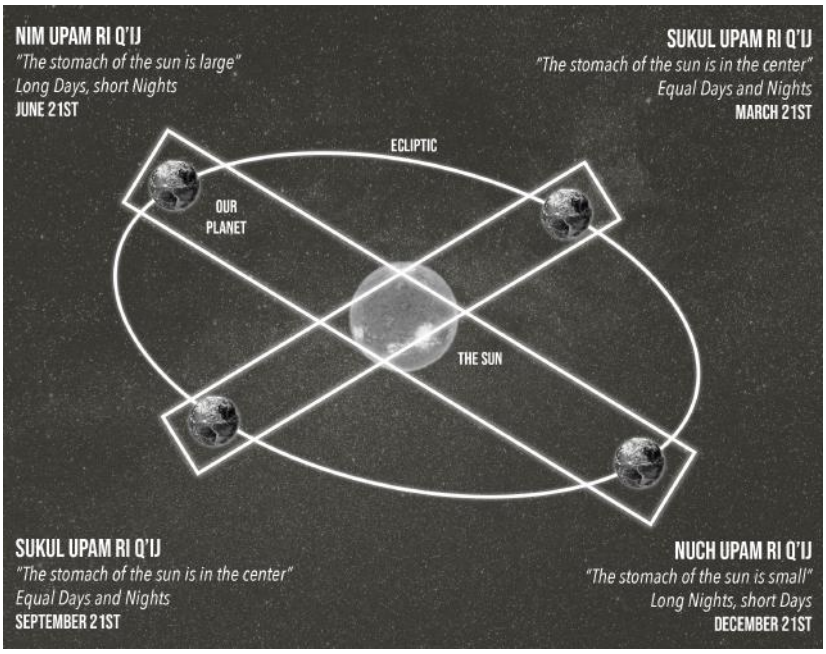
sun is at the center” or “the stomach of the sun is exactly in the middle,” an explanation derived from the astronomical observations made by the ancestors.

Based on this observation, it has been confirmed that in these Mesoamerican latitudes, it is the time when the Earth receives the same number of hours of sunlight and darkness, meaning days and nights of exactly the same duration. Consequently, in the elliptical path traced by the Earth in its journey, the other two positions are the times when the Earth is furthest from the sun and the length of daylight changes. These two positions of the Earth are called:

Nim Upam Ri Q’ij, which etymologically can be understood as “the stomach of the sun is large.” This occurs approximately on June 21 and refers to the time of year when the days are longest and the nights are shortest, meaning when the Earth receives more hours of sunlight. On these days, it is common to hear people say “it’s already seven and it’s still light out” because the day ends at approximately 19:00 hours. Nuch or Chutin Upam Ri Q’ij literally means “the stomach of the sun is small,” the period when the days are shortest and the nights longest, due to the position of the Earth, and consequently, it gets dark earlier as the day ends at approximately 17:45 hours. Similarly, in family conversations, people say “it’s already dark and it’s still early,” which occurs around December 21.

It is important to recognize that the results of the research presented above were developed by students and facilitators. These data are currently used and cited by some researchers when addressing important aspects of recent Mayan astronomy.

The authorship and credit of the research team –students and facilitators– is acknowledged. The illustration of the Earth’s orbit around the sun is reiterated, and three other illustrations are presented, detailing the four positions based on Xukulem, a Mayan ceremony that is currently performed with honey or substituted with sugar.



The images presented here show how elements of the scientific knowledge of the ancestors remain alive in current cosmogonic practices. Probably, some of the Ajq'ijab' (timekeepers) cannot explain the astronomical and philosophical aspects of Le Xukulem or ceremonies, due to condemnation from religious prejudices that have hindered the freedom to record, systematize, document, and disseminate these knowledge systems.

Saq b'e

In simple interpretation, it can be understood as the white path. If translated literally, it equates to white path because, in Maya linguistic logic, the adjective precedes the noun, similar to what happens in the English language, for example. It also means the Milky Way.

In Maya astronomical logic, the term acquires immeasurable connotations as it is the way to name the Milky Way. It is the path in space, in time, and the infinite through which the solar system we live in travels. Here, the material, energetic, and spiritual or emotional paths occur, guiding the course of our existence. On the other hand, throughout the Maya Mesoamerican territory, there are ancient constructions that defy time and modern construction logic. These roads and plazas made of white limestone are also called Saq'b'e.

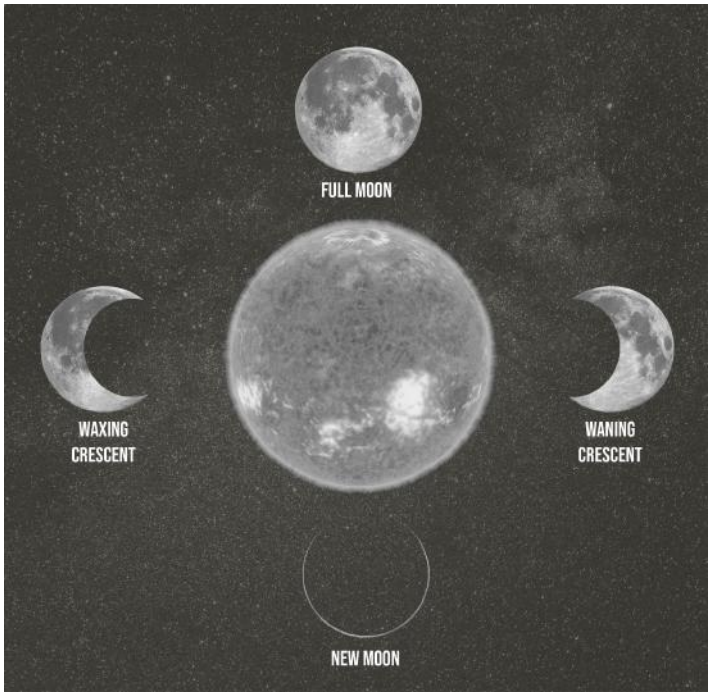
Currently, it is common to hear grandmothers and grandfathers when purifying and blessing their descendants with rax pom or copal pom and candles of Maya

colors, pronouncing the ceremonial language: “may your path be white... may your path be clean... may your path have no twists... may your path not be too tiring... happy and content, begin your path... happy and content, finish your path... happy and content from the moment you open your eyes... happy and content until you close them.”

Watit Grandmother Moon

On the other hand, the moon is recognized for its feminine energy. It moves in an orbit of approximately 28 days.

Its influence in relation to the various bodies of the Earth is truly extraordinary, for example, the tides and the cycles of the sap in plants, the influence on female organic functions, hence the way of counting the Mayan time known as Cholq’ij or sacred lunar calendar, according to the ancestors “is woman.” Similar to the way the Earth revolves around the Sun, the moon orbits around the Earth. The four main positions or phases of the moon define the influence these positions have on the lives of people, animals, plants, and elements of nature.



Main Positions of the Orbit of WATIT Grandmother Moon

In the imagination of Mayan astronomers, geometric ideas or representations were configured based on the movement of celestial bodies, which were then

translated into philosophical explanations that underpin many cosmogonic practices.

For example, the four main positions of the Earth and the moon gave rise to the symbolic astral and spatial positioning in the lives of the Mayans, defining "the four corners of the universe and the four corners of the world." Undoubtedly, we are faced with what could be termed holistic thinking, recognizing the importance of what is external, but also acknowledging the validity of the internal.

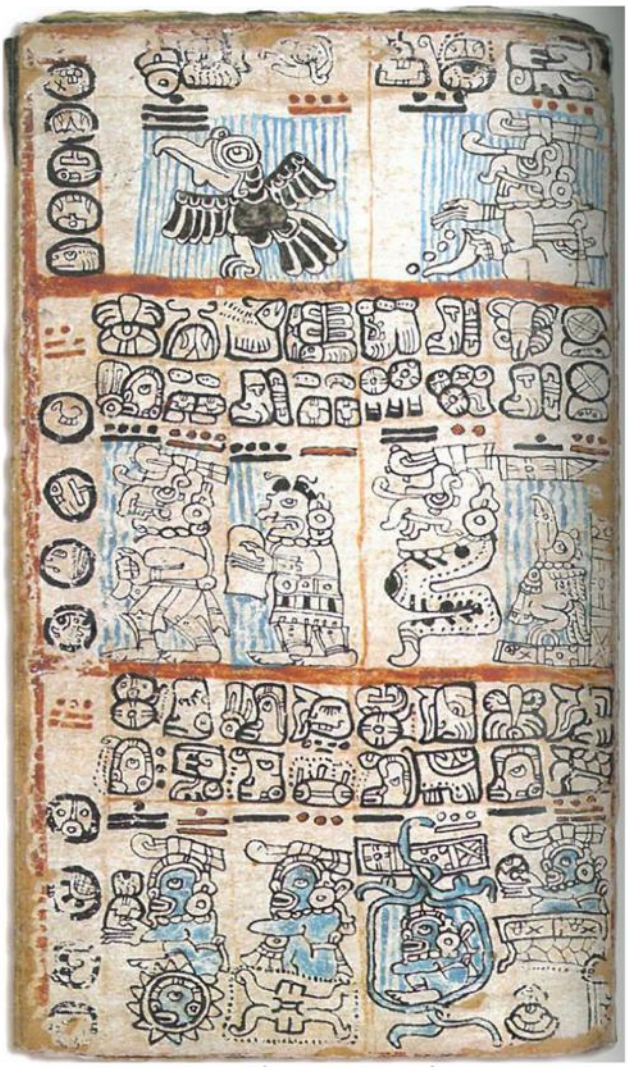
Later, we will discuss each of the ways of measuring time based on the Earth's orbit around the Sun, known as Ab' or solar calendar, and the Moon's orbit around the Earth, known as Cholq'ij, the sacred or lunar calendar, and the combination of these two time counts in the so-called calendar wheel, which defines Ri Mam or year bearers.

It is necessary to mention the few graphic documents that survived the destructive barbarism against the Maya people by the peninsular invaders, especially the infamous "autos-da-fé" of the doctrinal and evangelical priests, known as codices. These codices classify the cycles of the Sun, the Moon, and the planets.

Furthermore, the codices also contain details about the ways of measuring time, their application in the lives of individuals, society, and the environment. These knowledge and applications were explained by the Ajpop Kamja', experts, keepers, and interpreters of the synodic cycles of the planets: Mercury, Venus, Jupiter, Mars, Saturn, and the constellations, particularly the Pleiades, whose transit occurs every 52 Ab' or solar cycles.

A special case of Maya astronomical observation consists of the solar and lunar cycles as mentioned, with "tables" of lunar eclipse periodicity found in the codices. This information was used to establish agricultural activities, understand the planetary electromagnetic influence on people, and comprehend the cycles of Nan Ulew, Mother Earth.

Fragment of the Dresden Codex. Pages 8, 9, 10, 11, 12.



Madrid Codex fragment, Page 10.

Modern astronomers have referred to these ancient documents as codices and have assigned names based on the places where they are located, following their transfer to Europe after the Spanish invasion: the Dresden Codex in Germany, the Madrid Codex in Spain, the Paris Codex, also known as the Peresianus Codex, in France, and the Grolier Codex, “discovered” in Mexico.

Maya Numeration System

In the history of humanity and in the journey towards constructing knowledge, all peoples and cultures have needed to create diverse forms of classifying quantities, cycles, sets, and times in their material and immaterial expressions, which have been useful in their lives.

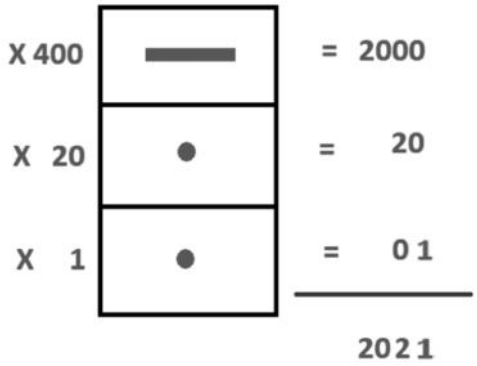
During different or simultaneous times, in various places on the planet, without any communication between peoples, diverse numerical representation systems were configured as means to record data and tangible evidence.

These records survive from both living and vanished cultures. Although a significant portion of this evidence was lost and destroyed due to being formed in perishable or degradable materials, various ways of counting were developed, creating expressions, figures, or symbols of representation. Undoubtedly, these systems utilized the means and elements available to them, represented with their hands and fingers, in clay, wooden tablets, knotted strings, paintings, among others.

This classification exercise, symbolization, and associative representation of quantities necessitate the synaptic action of the human brain: assimilation, graphing, and symbol processing. Naturally, this is how meaningful representations useful to individuals and often validated and accepted by society are constructed. Many of these numerical representation forms were refined over time. Their use surpassed the culture that created them, benefiting other cultures and peoples.

Nowadays, several of these systems are used by a large portion of the global population. In this context, we wish to highlight the intellectual contribution of the Mayan civilization in this field. We recall the impassioned words of Master Carlos Guzmán Böckler, heard by many during his lectures, who stated that in the history of numerical representation systems created by civilizations and peoples around the world, only four cultures were capable of developing positional numerical representation systems. These cultures flourished in India, Babylon, China, and Mesoamerica.

A simple way to explain this point is to note that, in these systems and particularly in the Mayan system, a numeric representation or graphic symbol can represent different quantities depending on its location, scale, or position. For example, to write the year 2021 numerically in the Mayan numbering system, it is done as follows:



The image shows only three levels or “houses,” as it is called in Mayan teaching when this system is taught. In the example, only the point and the bar—two symbols—were used for representation.

The following table now shows six planes. However, the number of “houses” or levels that this system can generate are infinite. Let us focus our attention on the mathematical operations that need to be performed in each “house” or level. We assume, always in the example, that a point represents the amount in the third column from left to right. The fourth column, which is outside the table, shows what in mathematics is understood as “exponentiation” or, in simpler terms: One - simple. One raised to the second power. One raised to the third power. One raised to the fourth power. One raised to the fifth power. One raised to the sixth power. And so on to infinity.

6	20 X 20 X 20 X 20 X 20	3200000	20^5
5	20 X 20 X 20 X 20	160000	20^4
4	20 X 20 X 20	8000	20^3
3	20 X 20 X	400	20^2
2	1 X 20	20	20^1
1	1 X 1	1	20^0

The Mayan numeration system was essentially invented to measure time and to perform calculations of cycles or agricultural periods. This is why the Mayan numbers are important in the accounts of the different calendars: they count and give meaning to days, months, years, cycles, etc.

The inclusion of series of numbers in the Mayan cosmology has significant applications for the individual and social lives of people. It is also crucial for the understanding and application of numerical accounts in cosmogonic practices and the computation of time. Indeed, intellectual preparation and criteria are required to understand the system, representations, and cycles that must be counted in logics that allow for the comprehension of the unfolding of time forward and backward.

Mysticism and spirituality emerge according to the significance and energy that the quantities or numerals assign to personal and collective life, from the calculation of days, within the various accounts of the Mayan time or calendars.

Elements of the Mayan Numeration System

Wai' x, the Zero:

The discovery of the value of zero is explained epistemologically and ontologically with its own philosophical arguments. In this regard, it is pertinent to explain that, unlike other cultures, for the Maya culture, zero is not absence or emptiness. In several Mayan languages, zero is said as wai' x, which can be understood as a principle or beginning. In this sense, the Ab' , agricultural or solar calendar, starts at Wai' x or zero. This calendar conceives twenty days for each month, designating each twenty-day group as a Winal.

Although it is not intended to boast intellectually, it must be mentioned that the Hindu culture invented zero three hundred years after the Maya culture. On the other hand, cultures considered highly significant for humanity due to their material and intellectual contributions, such as Greek and Roman cultures, never invented zero in their representation systems.

Characteristics of the Maya System

The methodology for learning Mayan numeration is open. In this sense, the various ways for teaching, representing, and understanding it are easy to explain, often turning the construction of quantities—many times unimaginable—into a game. This is achieved by using materials and elements for learning that are found in the learners' surroundings and environment.

School Children in the United States Learning Mayan Numeration

The cultural dynamics for learning Maya numeration also reflect the holistic and integrative thinking of their worldview. This is because the learning process integrates: the expression of ideas or verbalization, symbolization, and representation with any type of resources or materials, which allows for high and immediate levels of intellectual understanding.

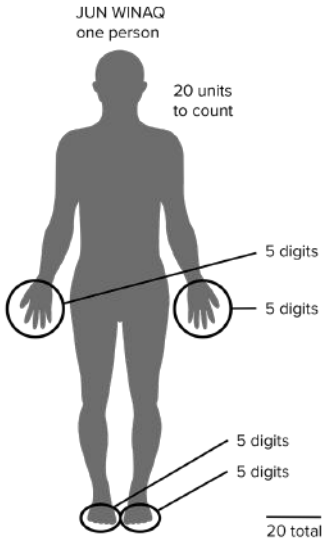
To corroborate what has been presented regarding the Maya numeration system, it is useful to conduct a comparative exercise, as traditional academia requires. The following table shows three numerical systems for simple analysis:

NUMERICAL SYSTEM	REPRESENTATIONS OR SYMBOLS	AMOUNT
ARABIC	1-2-3-4-5-6-7-8-9-0	TEN SYMBOLS
ROMAN	I-V-X-M-L-C-D	SEVEN SYMBOLS
MAYA		THREE SYMBOLS

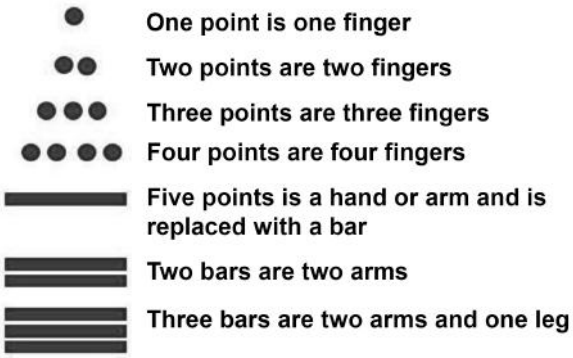
Other systems are based on counts of ten, or so-called decimals, and are purely horizontal or linear in representation. They accumulate and increase in powers of ten.

The Maya numeration system is inspired by humans' proximity with their fingers, which constitute natural instruments for counting; hence, it is known as a vigesimal system because it accumulates and increases in powers of twenty.

The way to say the number twenty in several Maya languages is JUN WINAQ, which is etymologically explained as JUN - one. WINAQ - person or people, so when one says JUN WINAQ, they are saying "a complete person" with their close instruments for counting: five fingers on each hand and each foot, adding up to a complete person of 20. The following is an image of JUN WINAQ:



In the representation of the numbers, there is also an allusion to the human body in the explanation of the following table:



Simple Rules of the Maya Numeration

- A maximum of four dots can be grouped together.
- A maximum of three bars can be grouped together.
- Each position can represent numbers from 0 to 19.
- Mayan numeration can be written either horizontally or vertically, as long as the dots are placed above the bar or to the left.

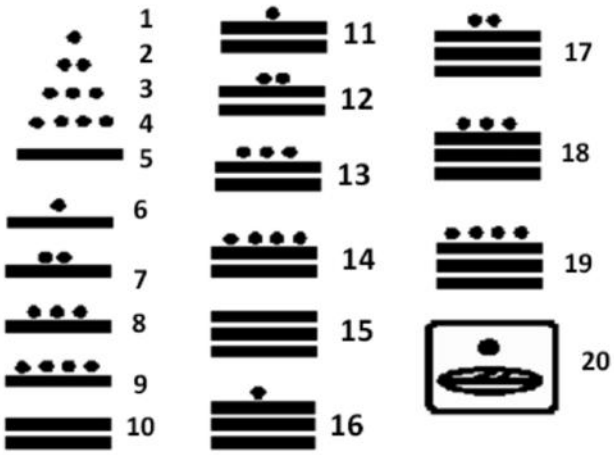
A characteristic of the Maya numeration system can be found in the definitions and types of learning known as:

- Experiential learning
- Meaningful learning
- Observational learning
- Discovery learning

These forms—among others—of constructing learning about the Maya numeration, when related to each other, allow what can simply be called an active learning system. This is because, during the construction of Maya numbers, the brain is very active; it is not about memorizing quantities, but “constructing” based on the signs that the learner sees.

For example, to “read” the number nineteen, one must sum each of the three bars that represent five each—fifteen—and the four dots. By summing the total of the quantities processed by the brain, it results in nineteen.

The Maya representations for showing the numbers from one to twenty are displayed below, and then the explanation of how to construct larger quantities will be addressed.



To construct quantities starting from twenty, it is necessary to put into practice what has been discussed so far. Therefore, we will return to the principles of the Maya worldview: everything is intimately related in this particular way of explaining the world, time, life, and things based on one’s own culture.

If it has been said before that it is a holistic vision, it is time to reflect on Maya numeration and mathematics in their form of learning and sharing, which is achieved through explanations of what is close and everyday.

The numeration system, much like Maya weaving, is constructed with horizontal and vertical imaginary fibers. The following chart, which will be explained easily, will serve us well:

13	•	X	4,096,000,000,000,000
12	•	X	204,800,000,000,000
11	•	X	10,240,000,000,000
10	•	X	512,000,000,000
9	•	X	25,600,000,000
8	•	X	1,280,000,000
7	•	X	64,000,000
6	•	X	3,200,000
5	•	X	160,000
4	•	X	8,000
3	•	X	400
2	•	X	20
1	•	X	1

According to what has been shown and explained, the Maya positional system accumulates and increases by powers of twenty. The chart shows thirteen "houses" or levels, each containing the symbol that represents one. However, depending on the "house" or level where the point is located, the following dynamic must be followed:

In the first level, marked with 1, or square one, any amount written there must be multiplied by one and read as units. Up to nineteen can be written in each level. If in the first square or level we place four dots, it should be read as: 1 x 4 = 4.

In the second level—marked with 2—or square 2, any amount expressed there must be multiplied by 20, so, for example, if in level 2 from the bottom up, we have four dots, we must multiply that amount by 20. The four dots that are worth four units in level 1, in level 2, represent the multiplication 4 x 20 = 80.

In the third level—marked with 3—or square 3, any amount written there must be multiplied by 400. In our example with the same four dots, we must multiply the amount by 400, resulting in 4 x 400 = 1,600.

In the fourth level—marked with 4—or square 4, any amount written there must be multiplied by 8,000—eight thousand—so the four dots in the fourth level must be multiplied by eight thousand. In the example, the four dots represent 4 x 8,000 = 32,000—thirty-two thousand.

In the fifth level—marked with 5—the quantity written there must be multiplied by 160,000—one hundred sixty thousand. The operation in the example is: multiply the four dots by 160,000, that is, four by one hundred sixty thousand. 4 x 160,000 = 640,000—six hundred forty thousand.

In the sixth level—marked with 6—the quantity written there must be multiplied by 3,200,000—three million two hundred thousand. For the example, the four dots must be multiplied by three million two hundred thousand. 4 x 3,200,000 = 12,800,000—twelve million eight hundred thousand.

Only six levels or “houses” have been exemplified, in the example chart it is designed up to level thirteen, but it can continue infinitely. The chart of these six levels, for better understanding, is:

nivel	6	••••	multiplicado	X	3200000	12800000
nivel	5	••••	multiplicado	X	160000	640000
nivel	4	••••	multiplicado	X	8000	32000
nivel	3	••••	multiplicado	X	400	1600
nivel	2	••••	multiplicado	X	20	80
nivel	1	••••	multiplicado	X	1	4

In all squares or levels, the numbers from zero to nineteen can be written, and they can be written horizontally with the dots above the bars or vertically as long as the dots are placed ahead of or to the left of the bars.

The following chart shows the maximum quantities that can be noted in each square or level, which is nineteen by the numeric base of exponentiation:

⁞III	X	77,824,000,000,000,000
⁞III	X	3,891,200,000,000,000
⁞III	X	194,560,000,000,000
⁞III	X	9,728,000,000,000
⁞III	X	486,400,000,000
⁞III	X	24,320,000,000
⁞III	X	1,216,000,000
⁞III	X	60,800,000
⁞III	X	3,040,000
⁞III	X	152,000
⁞III	X	7,600
⁞III	X	380
⁞III	X	19

The way to construct the immediate higher quantities in the squares is established by multiplying the maximum count of each level by twenty, and from there, the quantity that must be multiplied in each level or box is determined.

To establish the multiplier quantity for each level, the maximum count of each level must be multiplied by twenty, as the Maya numbering and mathematical system is vigesimal, meaning it accumulates and exponentiates in twenties.

The following chart explains how to establish the quantity by which each level must be multiplied to determine the immediate higher quantity:

13	•	X	4,096,000,000,000,000
12	•	X	204,800,000,000,000
11	•	X	10,240,000,000,000
10	•	X	512,000,000,000
9	•	X	25,600,000,000
8	•	X	1,280,000,000
7	•	X	64,000,000
6	•	X	3,200,000
5	•	X	160,000
4	•	X	8,000
3	•	X	400
2	•	X	20
1	•	X	1

And so on to infinity

20 X 6400000

20 X 3200000

20 X 16000

20 X 8000

20 X 400

20 X 20

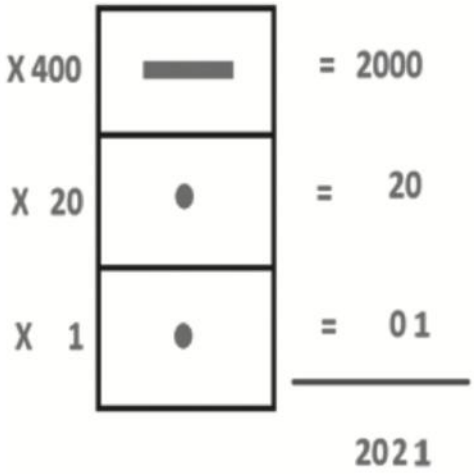
1 X 20

For this reason, to write the number 20, a zero is noted in the first level and a dot - which is multiplied by twenty - in the second box. Again, this is how the year 2021 is written.

1 X 20 = 20

0 X 20 = 00

total 20



As explained, just as garments are woven with horizontal and vertical threads and fibers, creating Maya attire and geometric representations, likewise, in holistic cultural thinking, the numerical and mathematical system of representations is "woven" with imaginary horizontal and vertical fibers.

Image Credits: Diana Alvarado. Association of Highland Women (AMA)

Maya Cosmogony

All cultures in the world have created their own ways of explaining and representing how the world was constructed and how human beings emerged, taking into account their reality. For this reason, knowledge is not universal but contextual. These ideas are contained within the subjective, intangible, or immaterial culture previously discussed.

Such cultural manifestations are classified within the explanations that anthropology calls cosmogonies; Cosmos is understood as everything that is created and exists in the environment, that is, a set of material elements that have an ordered form emerging from chaos. Gégona is understood as the creation or birth of what exists. Specifically, the term cosmogony explains the creation of the world and human beings through fantastic stories, cultural myths, religious dogmas, legends, songs, and other manifestations that are generally passed down from generation to generation, either orally or in written form.

For the case of the Maya culture, cosmogony flows from the elements of their worldview, constituting a fundamental part of orality. However, part of the cosmogony is written in the myths recounted in the Pop Wuj. Moreover, in the everyday reality of communication and cultural teaching, stories intertwine with what is written or symbolized graphically in the existing material cultural manifestations. It is important to contrast Maya cosmogony with other ways of explaining the origin of everything, in different contexts. For example, it would be useful to reread the theory of natural selection of species or the evolutionary theory of the English naturalist Charles Robert Darwin.

On the other hand, although the purpose of this work is not to endorse, disagree with, or disqualify other cultures, but to show Maya cultural elements, it is also worth examining the explanation of the creation of the world and the creation of human beings contained in the Biblical Genesis.

In the distant and recent past of society, including academia, these two forms of worldview have been in conflict: on one hand, the absence of God, and on the other, the unilateral intervention of God. In contrast, the Maya cosmogony proposes something novel, holistic, and conciliatory by recognizing that for the origin of the world and the creation of human beings, Tzakol – B'itol, Tepew - Q'uq'Kumatz'—that is, energy-matter—concurred. The two aforementioned pairs refer to the material and the energetic-spiritual. The cosmogonic moments cited in the Pop Wuj about the creation of the Earth state:

"No land was seen anywhere, only the sea was dammed; the sky, all still; there was nothing of what is a thing, everything was absorption, nothing moved; the sky had just been made, there was nothing raised either. Only the water was

dammed, the sea was spread out, dammed, there was nothing that is an object, everything was formation, everything vibrated in the darkness of the night. Only Tzakol – B'itol, Tepew - Q'uq'kumatz'... but there was the spirit of the sky, behold its name Kab' Awil' 'Double Gazed they call it.' 'Earth!' they said, and at once it was created, it appeared like a cloud, like mist was its appearance. This is when it emerged, the mountains came out within the water...".

The Pop Wuj refers to Tzakol as energy, B'itol as matter. Tepew represents the fertilizing force, while Q'uq'Kumatz symbolizes the life-generating matter. Regarding the emergence of human beings, constructions with a straightforward logic are described, spanning across four moments that archaeologists, anthropologists, and historians identify as epochs:

First Creation: Plants and animals. In oral tradition, it is taught that Tzakol -B'itol commanded the animals to speak. They did not speak, only made sounds like ku... cho... tuk... cries and squeals related to the sounds of each species. They did not speak to their creators and thus disappeared.

Second Generation: The Pop Wuj and oral tradition say that they were beings made of mud, water, and earth. They had no understanding; they spoke but did not think. Consultation was then made with Xpiyakok and Ixmukane, who were Nim Aj Xolb' Tzukul, great inquirers, who performed the consultation with their sacred elements—what is presently done with tz'ite' seeds, called le upajik, which can be understood as "weighing, calculating, or estimating" the energy. This is what today's Ajq'ijab' do with their pizom kakal, patán or sacred bundle that contains 260 seeds from the tz'ite' tree or pito tree.

Third Generation: Women of Sibake, Delicate Plant Fiber, and Plants Growing in Water; Men of Tz'ite' Tree Wood. It is mentioned that this generation spoke and exercised their thoughts to unfathomable depths. In some versions of the Popol Wuj, it is said that they knew the "round face" of the earth but did not give thanks and disappeared.

Fourth Generation: Men and Women of Corn: This generation prevails from the mythological archetype modeled in the Pop Wuj when it says that corn came from Pan Paxil – Pan K'ayala'. The practice of grinding corn is a daily exercise in the communities, derived from the teachings of Grandmother Ixmukane, who ground the white and yellow corn cobs nine times. Regarding the current generation, oral tradition continues to convey that: Saq Ixim, white corn dough, was used to make the bones of the people. Q'an Ixim, yellow corn dough, entered into the flesh of the people. Q'eq' Ixim, black corn, was used for the hair and eyes of the people, and Q'aq' Ixim, red corn, entered into their blood.

In the cosmogenic practices of the present, there are clear manifestations of the explained cosmogony. For example, it is said that the Maya and Guatemalans in general are grateful, no matter where we are, we give thanks for everything. But particularly in the le xukulem Maya ceremony, you can hear them say sib'laj maltyox ajaw... jumul... kamul... oxmul... kajmul.... which can be translated as: "*to you mother-father, once... twice... three times... and up to four times, infinite thanks*."

It must be mentioned the deep respect directed towards all beings of nature, animals, and elements, because they were created before human beings. Contrary to anthropocentric thought, in Maya cosmogonic and holistic thinking, we recognize ourselves as a small part and not the owners of everything.

However, it is fair to recognize that the majority of Guatemalans, Maya, and people from other cultures live in ways that contradict what defines, proposes, and guides Maya philosophical thought. This is a consequence of the colonial imposition, which is based on the material rather than on the physical and spiritual energetic balance of individuals.

Therefore, it can be said that all the elements that shape the worldview of the Maya people continue to be relevant in the present and are interconnected for the social construction of "the good life" or utz' kaslem.

The Sacredness of Water

On the other hand, respect and recognition for water can be experienced in the sacred place of the Maya-Mam people, at the Chikabal lagoon, especially during the grand ceremonies in favor of the vital liquid.

It should be mentioned that our ancestors, since the European invasion, encountered a historical crossroads: on the one hand, they were forced to assume the anthropocentric vision that promotes human supremacy over nature, or, on the other hand, continue transmitting the cosmogonic vision of our culture, where we are part of the earth, the water, the wind, the sun, the moon, the stars, the flowers, the forest, and the rivers, and not their owners.

They opted—clandestinely—against the peninsular dominator to maintain and transmit the holistic thought based on U tzakat—I am you... and you are me—which recognizes our dependence on Nan Ulew—Mother Earth. From this pulse, conceived millennia ago, they decided to perpetuate the sanctification of the elements that allow us life, water for instance—vital during this pandemic—and

"hid" water-related celebrations within practices that the impostor would later arbitrarily designate as religious syncretism**.**

The Chikabal Lagoon, in the Maya-Mam region of Quetzaltenango, exemplifies cosmogonic practices in le xukulem—ceremonies—to give thanks for water and to pray for rain, rituals that our ancestors performed on May 3rd in CHIKAB'AL. This act was condemned and labeled as the day of the "sorcerers' presentation" at the lagoon.

The detractors of our practices, out of their ignorance, thought that the pom, copal, and candles of red, black, white, and yellow—colours of the sacred corn—were meant to invoke demons. They were entirely unaware that the blue and green candles symbolize the infinite sky and nature's bountiful life.

There in Chikab'al, in these times, we continue to give thanks for the water... we continue to ask for the rain... we continue to find ourselves with the universe, with our ancestors, and with ourselves... we continue to make the cross with four equal arms, surrounded by the astronomical ellipse of the earth around the sun, which signify the four corners of the universe – the outside – and the four corners of the world – the inside. Thus, the celebration on May 3rd is more intimate and discreet, compared to the so-called "prayer for rain" which is held massively 40 days after Holy Week, on the so-called Ascension Thursday. Both celebrations exist because of the wisdom of our ancestors in "hiding" them within Christian celebrations.

Our brothers and sisters from ASAECO, who care for the lagoon, wrote that in the Maya-Mam language, Chikab'al means: Good Place - Sweet Place. Chikab'al has been declared a Natural and Cultural Mayan Monument.

Values

There are a considerable number of theoretical approaches regarding values, documented by women and men based on their own experiences and learning within the warmth of family and community. These approaches hold the view that values constitute the construction of ideas, orientations, and concepts, aiming primarily to promote harmonious coexistence in society.

Regarding this, the work of Licenciado Don Manuel Salazar Tesaguic is recommended: "Ruk'u'x Maya Na'oj: Mayan Values," where he developed the significance of these values such as: recognition of Ajaw, respect for life, and the sanctification of nature, among others. Katit-Kamam. Mayan Time in Xelajuj No'j.

However, just like values, it is important to understand antivalues. In terms of a way to educate and understand the evil that means disrespecting values, this is communicated in the Pop Wuj through the myth:

Wukub' Kaqix

Wukub' Kaqix is a character mentioned in the Pop Wuj, and the name means 7 Macaw. In oral tradition, it also explains how our seven shames or seven thorns can emerge if we lose balance. An ancient myth of the Mayan people tells that Wukub' Kaqix was a character who believed himself to be the sun and the moon. Based on his ornamentation and the decoration of his teeth, he claimed:

"*I will now be great among all creatures. I am your sun, I am your light and whiteness. I will also be your moon because my clarity is great. I alone will be for those who are to walk and stand upright. Everything is possible because my eyes are made of silver and they shine with precious stones and are green stones like the sky. The brightness of my nose can be seen from afar, just as the moon is seen. My throne is made of silver, and when I come out the earth is illumined. And thus I am sun, and I am moon, for the clarity of the vassals I will have, because my sight reaches very far.*"

From this account, in the Mayan oral tradition, the value of emotional and material balance of the talents or material goods a person possesses is communicated.

What happens is that, by transgressing the social lines constructed in the social imaginary in terms of values, humility—understood not as humiliation—service, and the basic gifts or talents that define one's nawal dissipate. The service to society or community can also be damaged. Therefore, it is important to cultivate the definition of building Utz' Kaslem or the full life that fulfills the ethical cultural support contained in the essential: I am you and you are me.

Moreover, arrogance, vanity, and self-exaltation cause the destruction of the harmony and balance of the human being, to the point of losing the sense of full life, both individually and communally. Thus, the myth of Wukub' Kaqix wholeheartedly denies the construction of reciprocal and fair relationships for life in society.

In this sense, and as previously mentioned, emulating the personality and behavior of Wukub' Kaqix is practically equivalent to being a militant bearer of the seven shames, which are harmful to both the individual and the community whose dignity is disrespected.

According to the grandmothers and grandfathers, the seven shames from which one must continuously distance oneself are:

- Ingratitude
- Lying
- Ignorance (due to laziness, because when there is no one to teach, it is not shameful)
- Envy
- Vanity
- Disrespect for life (crime)
- Unbridled ambition

The myth in the Pop Wuj indicates that Wukub' Kaqix was overcome with ingenuity and without excessive violence by Hunajpú and Xb'alankeej. It also suggests that we can remove the shame from our family, ourselves, or our people through our actions. Therefore, it is taught daily that our deeds should honor our dignity, the dignity of our family, and the dignity of our community. The teachings of the contemporary Maya propose that respect can be taught and promoted, as well as the practice of attitudes that enable a dignified and useful life for both individuals and society. Because of this, it is common to hear the following advice among families: "*With your actions, do not bring shame to others, our family, or our community*."

Maya Languages

One of the important aspects of cultures is their own languages, as they provide the means through which other elements forming the body of knowledge are expressed, symbolized, and transmitted. While language is not the sole foundation of identity and cultural definition, it serves as a support for the enhancement of human beings in terms of peace and freedom.

Previously, the languages recognized in Guatemala have been presented. Now we will distinguish aspects that the Mayan culture attributes to languages and the ways of organizing, constructing ideas, words, knowledge, and concepts.

Maya Writing

It has been established that there are three basic ways in which ancient Mayan writing can be interpreted and explained:

1. **Allegorical Writing**: This type of writing reveals concepts through an immense network of emblems, sounds, models of perception, or poetry that, through the exercise of metaphors, communicates reality. This is the case with the Pop Wuj.
2. **Glyphic Writing**: This form of writing is recognized by using symbols that are unique and exclusive to the culture, different from the geoglyphs of Egyptian writing. It necessarily requires decoding in the sense of opening the symbol to its multiplicity. Its special characteristic is that in the smallest spaces, the richness of reality is stored.
3. **Logographic Writing**: This involves the use of ideograms or unique logos to express complete ideas or finished concepts that can be easily understood upon observation.

As an example of the importance that knowledge, appreciation, conservation, and transmission of languages and cultures have for the advancement of peoples, we will address particular characteristics of Mayan linguistics. This serves as a viable alternative to understanding, compiling, safeguarding, and reproducing the knowledge preserved in the daily expressions of society. Often, these expressions are not analyzed for their significant content from a linguistic, graphic, and auditory perspective.

Maya Writing in the Dresden Codex

Onomatopoeia in Mayan Languages

One of the characteristics of the worldview is its easy, simple, and accessible explanation, making it comprehensible to any person regardless of age. This condition has been a useful pedagogical alternative in both the past and the present. In linguistic or idiomatic terms, Mayan onomatopoeias are explained as the characteristic of embedding the sounds emitted by nature, the subject, object, or thing to which they refer. To construct these onomatopoeias, observational processes, listening, sound recording, and practice for expression have been necessary, as shown in the following examples:

XAJAB': In several Mayan languages, this can be understood as shoe or sandal. For instance, when a child asks their grandparents: "Tat, why do we call shoes or sandals xajab'?" The grandparents respond: "When you walk across the plain, the forest, or on dry grass, the sound your feet make as you walk is xajab'... xajab'... xajab'..."

TUKUR: It is used to name the owl, based on the sound of its call: tukur... tukur... tukur.

TOL: This is said for a gourd bowl, as when it is struck with fingers, it makes the sound: tol... tol... tol.

K'OL: This term is used to describe a turkey, based on the sound it makes when it runs: k'ol... k'ol... k'ol.

XAR: This refers to a bird known as a blue jay, which makes the sound: sharr... sharr... sharr. The word "xar" can also mean blue in color.

CH'ICH': This refers to something metallic, like iron, and it is also used to describe cars due to the sound metal makes when it rubs together: ch'iii ch'...

CH'OK: Zanate (a type of bird), named after its song: ch'ok... ch'ok... ch'ok.

TZ'UNUN: Hummingbird, named after the sound its wings make when it hovers in the air: tz'ununnnnn... tz'ununnn.

TZU: Refers to a gourd used as a container, based on the sound produced when blowing into its opening: tzuuuu...

TUKTUK: Woodpecker. When the woodpecker drills into a log, it produces the sound: tuktuk... tuktuk... tuktuk...

Toponyms

Toponyms are names in Mayan languages, in the case of Guatemala, given to municipalities, villages, neighborhoods, hamlets, settlements, hills, and places; these toponyms generally indicate some characteristics of the places such as historical events, geographical features, lineages that inhabit the place, or references linked to their own worldview. At present, both densely populated areas and rural communities conserve a significant number of original toponyms which, despite having undergone linguistic corruptions, clearly reference the Maya culture.

Examples of these toponyms and the corruptions they have undergone are presented below:

Current	K'iche Language	Spanish Translation
Xelajú	**Xe´ Lajuj No´j**	Under the ten ideas
Nahualá	**Nawal Ja´**	Spirit of the Water
Xeul	**Xe´ Úl**	Below the hill
Xeabaj	**Xe´Ab´aj**	Below the Stone
Parraxquim	**Pa Rax K´im**	Among the Green Grasses

Epistemology of Maya Languages

To fully understand the significance of Mayan languages, it is prudent to present some examples that support and underpin the epistemic, ontological, cultural, and philosophical meanings used in the construction of words. The explanation of word meanings, besides being easy, immediate, comprehensible, and close to everyday events, gives sense to what it refers. Below are presented two examples, in stories told for centuries by ancestors:

Canche - Q'anche'

When the Spanish invaders arrived, our ancestors encountered a different type of people. Accustomed to the proximity of brothers and sisters who had the same phenotypic traits, it was strange to see people with different physical

characteristics, such as height, body build, skin color, eye color, and hair color. In popular Guatemalan colloquialism, people with blonde or light hair are called “chanche.” This way of naming them has a Mayan idiomatic root that has undergone expressive or pronunciation corruption. The explanation for this is as follows: the word “canche” is a corruption of the expressions of the K’iche’ Mayan language that means “yellow tree.” The reason this term was used to name people with blonde hair can be understood through the imagination of those who observed them and said: “le q’an che” (“the yellow tree”).

The translation of this expression to Spanish, literally is: “el amarillo árbol”. In the conceptual translation, it is: “The one that is like a yellow tree,” because to say tree, one says: che ' and yellow: q’an. Just like the English language, as already mentioned, Mayan languages place the adjective before the noun. For example, in English, one says yellow tree, whose literal translation is “amarillo árbol,” but according to its own semantic, phonetic, and morphological configuration, it is understood as: “árbol amarillo.”

If in an exercise of virtuality so common nowadays, we imagine that the ancestors, upon seeing a Spaniard, said: ahh!... le q’an che ' the one that is like a yellow tree, for his height and for the color and lusciousness of his long hair.

K’ulnem – K’ulanem History

Chumil, Star of the House, asked her grandmother: Lajuj Tz’ikin, Ten Birds.

“Grandmother, when you married my grandfather, what was the wedding called?” she asked.

Grandmother Lajuj Tz’ikin replied:

“To say wedding or marriage in our Mayan K’iche’ language, we say K’ulnem,” said Grandmother.

“And what does K’ulnem mean?” asked Chumil Ja’.

“Here in Xelajuj No’j, Quetzaltenango, we call a wedding K’ulnem, but in other nearby linguistic communities, it is called K’ulanem.

These are known as dialectal variations, and they exist in all languages, meaning they have small differences in expression but are understood and refer to the same act,” said Grandmother.

“Now, the most important explanation, which you must learn to feel proud of your origin, is the following,” said Grandmother.

Chumil Ja' settled in her Grandmother's lap and began to stroke her Grandmother's long white hair. Her large black eyes shone even brighter as Grandmother, Lajuj Tz'ikin, said to her:

—The word is composed of two expressions that have profound meaning for individuals and society. The first is K'ul, which means jacket, blanket, or covering. The second is Anem, which for easy understanding refers to two people doing something—explained Grandmother Lajuj Tz'ikin.

—In linguistic terms, the expression anem is the suffix used to indicate an action performed by two people—she completed. —And what does k'ulnem mean—asked Chumil Ja' again.

Grandmother replied: "When two people get married, they join their lives, hearts, and bodies, so if we understand 'K'ulnem' as 'two people who cover themselves with the same jacket', we are remembering the act where a man and a woman come together and cover their lives with the same jacket that symbolizes the microcosm of the family within the macrocosm of society and the universe, where they will share their joys, their sorrows, their successes, their failures, and the construction of Utz' Kaslem, the good life for themselves and for their children," concluded the grandmother.

The stories presented provide an approach to understanding the deep connection that exists between all elements of the Mayan worldview, which are expressed, understood, lived, and accepted by the society as part of the sustenance for their spiritual life or the fulfillment of their psychological needs.

Maya Health System

Since the violent incursion of the peninsulars in 1524, in what is now Guatemala, a new form of organization, forced evangelization, and Eurocentric worldview and cosmogony based on anthropocentrism and inhumane exploitation at the expense of the health and very lives of the subjugated population were implanted.

This means that, after the establishment of the Spanish colonial regime, the subjugated population had no alternatives to attend to and maintain their health. It is known that the diseases brought by the Spaniards decimated the population because the indigenous peoples had not developed an immune system to combat unknown diseases. On the other hand, the health system of the invaders was also insufficient for the peninsulars themselves, as it is known they arrived with material shortages, and their resources were not adequate for them, let alone extend to the afflicted peoples.

Without meaning to suggest that Mesoamerica was a terrestrial paradise, the ancestors had their own health systems, as evidenced by the oral tradition preserved and practiced under adverse conditions, with constant attacks and disqualification. Even in those circumstances, they established strategies to transfer this entire body of knowledge to subsequent generations.

Part of this wisdom is contained in the way health is perceived, the style of maintaining people's health, and the practices for addressing and healing physical and emotional imbalances in society. All this was done in the face of aggression, disqualification, and the "demonization" of their ways of understanding and maintaining the concept of health from their own perspective.

There is no single way to define or theorize the Mayan health system. An important part of their worldview is presented in the following proposal, constructed from what the grandmothers and grandfathers understand, explain, and teach in their own words. The perception of Mayan health-disease goes beyond what has been recently taught in academic settings, where health is merely the absence of physical discomfort and imbalances.

An example is provided by the Ajkunanelab' grandmothers and grandfathers, who are regarded by the population as knowledgeable in the properties of environmental elements for health. In their words, they explain health as:

"*Being happy, a fundamental basis for life.*

A good state of the human body.

Being satisfied and giving thanks to Ajaw. It is a gift from Ajaw.

It is being well in body and spirit. It is when a person has balance and harmony, both materially and spiritually.

Health is necessary to live in peace and work. It is the most valuable thing a person has.

When they define the illness, they say: It is forgetting Ajaw.

Being unmotivated and feeling weak. Discomfort of the body, causing physical and mental exhaustion. Having problems and poor physical conditions.

It is something that destroys people, in their body and spirit.

It leads us to poverty and death.

It causes problems in our family. It makes us feel bad, without wanting to work, it wears us out physically and spiritually."

The previous perceptions have been interpreted in academia as "amusing expressions of the indigenous people," since, from unilateral and "modern" viewpoints, the ways of addressing indigenous health, and in particular Mayan health, are not backed by arguments from validated or current sciences. Rather, they are considered unscientific practices without verification, despite the fact that before and after the invasion, they have been the health alternative for Mayans and non-indigenous people in the Mesoamerican territory, including during the current Covid-19 pandemic, which has now lasted almost two years, without a visible cure from the so-called "Western" health system.

Currently, there is a strong social movement for the recognition of the Mayan health system, and for respecting the women and men – generally elders – who preserve, practice, and transmit this system, which is attempted to be theorized as follows:

The Mayan health system is a set of knowledge, practices, and teachings from the culture, with the primary goal of preventing, improving, and maintaining the physical, emotional, spiritual, and social balance and well-being of people, from their own worldview.

This system may or may not have its knowledge documented, it is generally transferred through oral tradition and learning in practice with the guidance of elders who consider their profession a genuine "gift."

The Mayan health system comprises:

- The perception of health/disease.
- Preventive system.
- Curative system.
- Knowledge of the healing properties of the elements of the ecosystem.
- Treatments using natural alternatives from the environment.
- Utilization of material and spiritual elements -objective and subjective culture- therapeutically.
- Participation of the actors in the system –therapists-.
- Community service.
- Availability.

Each part of the Mayan health system is explained as follows:

Etiology

General etiology is a branch of medicine that explains the origin and causes of diseases. In the case of the Mayan health system, its etiology explains the causes from two different realms:

Natural Diseases

These can be understood as diseases that have a logical explanation, making them easy to understand, diagnose, and treat. For instance, eating food that is too cold or too hot and causing harm, the transmission of diseases from person to person, or issues arising from an excess or lack of food. Such physical imbalances can be classified as simple pathologies within the official system.

Supernatural Diseases

These are diseases caused by the disturbance or loss of emotional, spiritual, or energetic balance in individuals. Katit-Kamam. Mayan time in Xelajuj No'j. Produced by sudden, traumatic events such as excessive fear, uncontrolled emotions - joys or sorrows - and, as the grandmothers and grandfathers say, "by behaving badly" or holding onto things in the heart and mind that cause harm. These diseases can be classified under psychosomatic causes.

Maya Preventive System

To prevent illness among the people, the Mayan health system offers various alternatives that therapists or healers use to prevent or anticipate sickness. These alternatives have been transmitted through oral tradition and cultural practices, which include:

- Cultural myths.
- Local, regional, and cultural legends.
- Advice from grandmothers and elders.
- Rituals for spiritual and energetic balance.
- Treatments using natural alternatives from the environment.

Maya Curative System

Once the causes of natural diseases have been established, or to balance and harmonize the bodies of people suffering from physical illnesses or emotional-spiritual imbalances, the following areas or forms of treatment can be identified:

Treatments with Elements from Plants

In these therapies, leaves, stems, flowers, roots, seeds, sap, bark, and fruits of plants are used to treat diseases. The applications can be in various forms, such as infusions and poultices or direct applications.

Treatments with Elements from Animals

For these treatments, elements or parts of animals such as blood, bones, fats, skin, and meat are used. According to the criteria of each healer or therapist, the method of application, duration, and quantity are determined.

Treatments with Mineral Elements

Within the application of minerals for healing in this system, limestone, clay, salt, sulfur, and different types of soil are used. Each AjkunaneL -healer- determines the method of application, duration, and quantity according to the illness being treated.

Treatments with Water or Baths

Alternative Mayan healing treatments classified within baths can be hot or cold, general or localized. As with other alternatives, each therapist diagnoses, doses, and applies the appropriate type and amount of bath for each illness based on their experience.

Tuj o temazcul Maya para baños.

Application of Massages

For this healing alternative, it is necessary to recognize that not just anyone can perform it. According to the worldview, it is established that the Jikonel, or people who apply massages, possess a particular “gift” or energy that allows them to transmit human electromagnetic currents to harmonize and balance the proper functioning of the body, bones, or nerves of individuals.

When addressing and explaining the health system, one should not overlook the deep connection that Ajkunakelab’ or healers make with the ecosystem, which signifies the characteristic of feeling like a part of the world rather than its owners. During the initial examination for diagnosing a patient, permission is asked with the phrase: sach b’a le nu mak, which can be understood as: “excuse my fault because I am going to touch your body.”

Additionally, this holistic approach, where everything is considered alive for treating diseases, includes speaking to plants, animals, water, earth, and minerals.

Consequently, it is common to hear grandmothers and grandfathers invoking, praying to, or smudging the elements they use so that their energy heals people.

Therapists of the Mayan Health System

- IYOM – Midwife
- AJB'AK – Bone Setter
- AJQ'IJ – Day Keeper
- AJCHAY – Bloodletter with Obsidian
- AJQ'AYÍS – Specialist in Medicinal Plants
- AJTUJ – Purifier and Healer within the Tuj or Temazcal
- AJ-EYAJ – Treats Teeth and Molars
- AJ-CH'UT – Healer with Snake Teeth or Thorns

It is important to mention that despite the vilification caused to the Mayan health system by various sectors, it remains relevant. Since ancient times, the words of Theophrastus Paracelsus, a Swiss alchemist born in 1493, help value this system when he stated: "*All things are poison, and nothing is without poison; the dosage alone makes it so a thing is not a poison." "What one generation considers the pinnacle of knowledge is often regarded as absurd by the next, and what is deemed superstition in one century can become the foundation of science in the next*."

Regarding the commitment undertaken by each Mayan healer or therapist, it is important to explain that, from their worldview, it is the exercise and application of their "gift" in the service of the community. They are always available to attend to those who seek their help.

In contrast to other systems, which primarily focus on economic gain and profit, Mayan healers and therapists tend to and care for people without prioritizing or conditioning their service to payment or material compensation. This is evident in the words of Grandmother Estefana Velázquez Chajchalac, a Maya K'iche' from Xelajuj No'j (1884-1964): "*The Mayan health system is currently beginning to be systematized, documented, and presented in academia—although in an early stage—but it continues to be undervalued, disqualified, and ignored by a significant sector of society, particularly by those who view public health as a business*."

During the current coronavirus pandemic, the Mayan health system has emerged as a close, immediate, and economical alternative for those who are not reached by the official health system or who lack the financial resources to seek assistance from private clinics and hospitals. Many of the resources within the Mayan health

system have benefited individuals who have experienced, are experiencing, or will experience the harsh reality of living with—not fighting against, as proposed by their worldview—the coronavirus epidemic. This has been achieved through the use of infusions, vaporizations, and cleaning—sanitizing—the homes where people have isolated themselves to prevent spreading the disease.

Time Calculation

For the Mayan culture, the perception of time is not linear; that is, the Western concept of unrelated past, present, and future does not exist. In a different manner of counting time, Mayan thought has configured a series of instruments that record events, astronomical phenomena, natural epochs, and the influence these have on the individual and collective life of society, with a cyclical criterion. In other words, everything follows a time cycle and reiterates in a future dimension.

The different classifications and interpretations of these cycles were interwoven into a plurality of forms of temporal ordering, strongly linked with the stars, the periods of nature, and their combinations.

Surely, such a conception argues for the construction of the so-called calendars that, in the past, present, and future, have provided the good life: Utz' Kaslem, for the current generations and those yet to be born.

Consequently, four ways of counting these cycles, which are estimated to be the most well-known today, some of which have been preserved and practiced in part, as parts of their content are considered "lost," are briefly presented. However, current Mayan inquiry is in the search, recovery, and reinterpretation to explain and communicate their application. The four instruments estimated to be the most well-known are referred to in the following table:

AB´	Agricultural or solar calendar.	365 days.
CHOLQ´IJ	Sacred or lunar calendar.	260 days.
RUEDA CALENDÁRICA	Synchronization of solar and lunar	52 cycles AB' 73 cycles CHOLOQ'IJ 18,980 days.
CHOLTUN	Long or infinite count.	Cycles of 360 days and multiples of 20.

Ab’ Agricultural or Solar Calendar

Configured based on the Earth’s orbit around the sun, it is divided into 18 cycles or months of 20 days each and a small cycle or month of 5 days, adding up to 365 days calculated with precision and accuracy by the Mayan astronomers, as previously explained.

It is important to mention that, through this method of classifying days, many of its explanations, practices, and applications have been “lost.” Firstly, this is due to the destruction of the graphic instruments that contained their teachings. Secondly, it is because the wise individuals who understood its contents were annihilated. Thirdly, it is a consequence of evangelization, foreign cultural contact, and the imposition of the Gregorian calendar by Europeans.

It is estimated that for human beings of all cultures currently living in Mesoamerica, ignorance of the applications of the Ab’, agricultural or solar calendar, represents a significantly important deficiency in these times of global concern due to the effects of global warming or climate change. The Ab’ allowed knowledge and classification of the favorable cycles of nature for maize cultivation and the adverse cycles such as rainy seasons, droughts, hurricanes, frosts, or intense cold, which are also adverse for human beings.

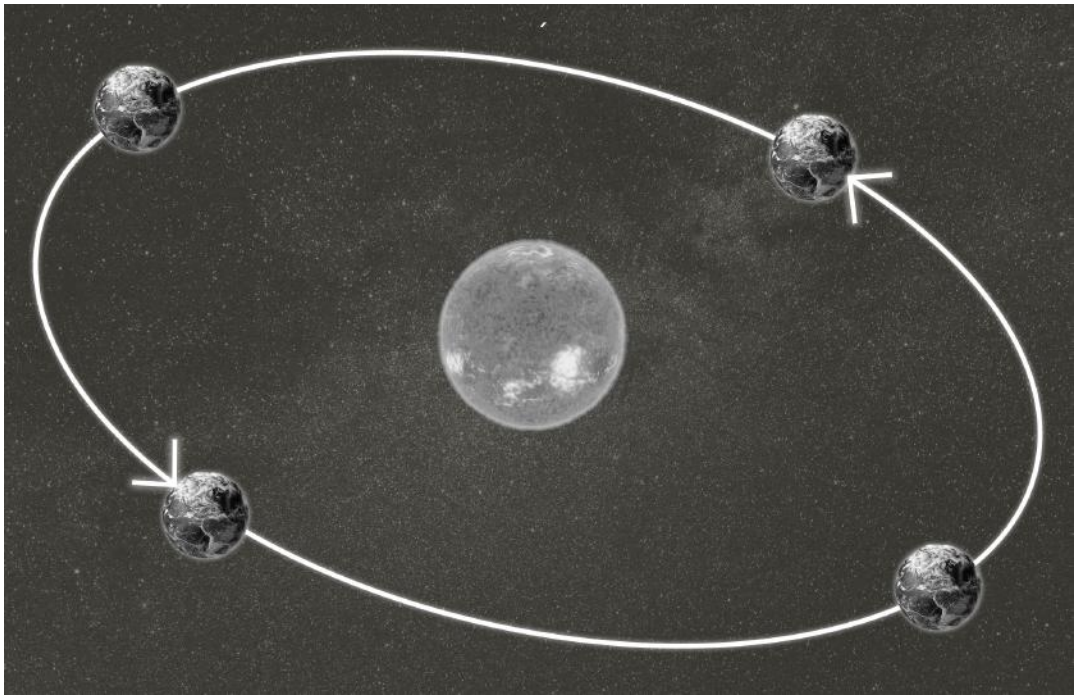
The Ab’ allowed the establishment of a sort of dialogue with Nan Ulew, Mother Earth, through the knowledge of favorable times for life and times that posed risks to subsistence, by taking only what was necessary for life without harming the ecosystem. This practice is currently known as sustainable agriculture or nature-friendly farming practices. Here, the Mayan philosophical thought applies: Utz Akat: “*I am you… and you are me*.”

Jun ab'

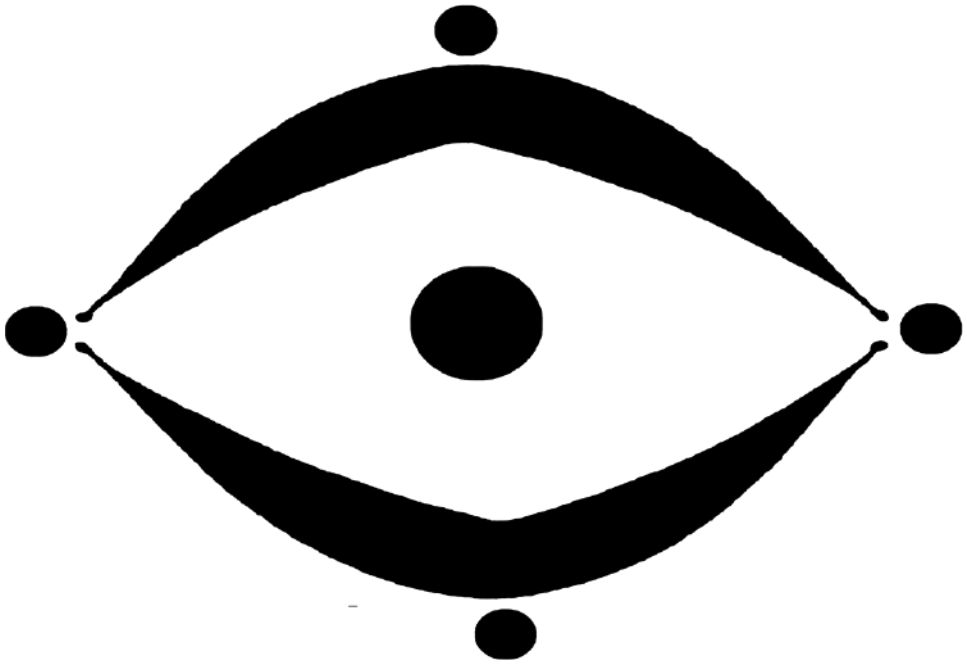
To name a period of 365 days, "Jun Ab'" is used, which literally translates to "one hammock." Etymologically, "jun" means one, and "ab'" means hammock. The philosophical, epistemological, and ontological explanation and foundation of "jun ab'" in the culture is based on the figurative representation of the Earth's orbit around the sun over a period of 365.2420 days.

"Jun ab'" is the name the ancestors gave to this method of timekeeping, inspired by the image of a hammock which relates to the Earth's elliptical orbit around the sun. The following illustrations show the astronomical figure of the Earth's transit in its elliptical orbit during the "solar year." Around the four positions that the Earth takes around the sun, cosmogonic or spiritual practices have been configured, which are exercised during ceremonies and cultural acts, in complete relation to the sun's trajectory. Thus, the four corners of the universe—external to the planet—and the four corners of the world—internal or nearby—are defined.

The names of the WINAL, or 20-day months, have been conceived by modern anthropology and archaeology from information contained in ancient documents or compilations made by doctrinal priests who accompanied the evangelization process.



Orbit of the Earth around the Sun



Representation of the "Rocking" of the Earth Around the Sun - Complete Cycle

The five-day period is called WAYEB', and the "mayistas," from their own perceptions and religious formation, defined it as an unlucky month, a period of bad luck, and even days of curse.

In contrast, the Mayan communities call it Awas Q'ij; within the collective imagination, it is considered "sacred" or a time for spiritual and energetic recovery. It represents a small cycle of purification, reflection, and personal and collective introspection, a preparation for a new solar time. This is when individuals engage in various activities deemed deeply spiritual.

In the Mesoamerican territory today, many Mayan people and others from different cultures dedicate this time to ceremonies; they pause their regular activities, refrain from working, and focus on physical care through food and diet.

Also, paying attention to relationships with other people is extremely important. It can be said that during these days, participants in Wayeb' or Awas Q'ij refrain from consuming meat, do not bathe in a shower but only in the Tuj or Chuj -temazcal-, rigorously avoid cutting their hair, eschew shaving, suspend sexual relations, and abstain from consuming chili and alcoholic beverages.

Only in this way is it possible to ensure the elevation of physical and spiritual energies to welcome Ri Mam -the bearer of the year- "happy and content in body and happy and content in the heart."

Dialogue with the universe is also important, in gratitude and request for rain, purification, and cleansing of the wind.

In short, it is the preparatory time to ensure a warm welcome to Ri Mam, in the new solar cycle beginning. The symbols of the Winal and Awas Q'ij or Wayeb', are recognized in the following expressions.

Each of the 18 Winal is counted consecutively from 0 to 19 to make 360 days, and the Awas Q'ij or Wayeb' from 0 to 4 to sum up to the 365 days of the agricultural or solar Ab'.

The start of a new Ab', when correlated with the Gregorian calendar, shifts or decreases by one day every four years—due to leap years.

Many people define the start of these 365 days as the "Mayan New Year," likely influenced by the Gregorian calendar.

For a better understanding of this, the following table presents a correlation of the AB' and the CHOQ'IJ with the Gregorian calendar during the final months of 2021 and the beginning of 2022:

DATE		DAY	NUMERAL	NAWAL	NUMERAL	MONTH
GREGORIAN			CHOLQ'IJ --- SACRED		AB' AGRICULTURAL-SOLAR	
1-oct	2021	Friday	12	KEME	4	SEJ
2-oct	2021	Saturday	13	KEEJ	5	SEJ
3-oct	2021	Sunday	1	Q'ANIL	6	SEJ
4-oct	2021	Monday	2	TOJ	7	SEJ
5-oct	2021	Tuesday	3	TZ'I'	8	SEJ
6-oct	2021	Wednesday	4	B'ATZ'	9	SEJ
7-oct	2021	Thursday	5	E	10	SEJ
8-oct	2021	Friday	6	AJ	11	SEJ
9-oct	2021	Saturday	7	I'X	12	SEJ
10-oct	2021	Sunday	8	TZ'IKIN	13	SEJ
11-oct	2021	Monday	9	AJMAQ	14	SEJ
12-oct	2021	Tuesday	10	NO'J	15	SEJ
13-oct	2021	Wednesday	11	TIJAX	16	SEJ
14-oct	2021	Thursday	12	KAWOQ	17	SEJ
15-oct	2021	Friday	13	AJPU'	18	SEJ
16-oct	2021	Saturday	1	IMOX	19	SEJ
17-oct	2021	Sunday	2	IQ'	0	MAK
18-oct	2021	Monday	3	AQ'AB'AL	1	MAK
19-oct	2021	Tuesday	4	K'AT	2	MAK
20-oct	2021	Wednesday	5	KAN	3	MAK
21-oct	2021	Thursday	6	KEME	4	MAK
22-oct	2021	Friday	7	KEEJ	5	MAK
23-oct	2021	Saturday	8	Q'ANIL	6	MAK
24-oct	2021	Sunday	9	TOJ	7	MAK
25-oct	2021	Monday	10	TZ'I'	8	MAK
26-oct	2021	Tuesday	11	B'ATZ'	9	MAK
27-oct	2021	Wednesday	12	E	10	MAK
28-oct	2021	Thursday	13	AJ	11	MAK
29-oct	2021	Friday	1	I'X	12	MAK
30-oct	2021	Saturday	2	TZ'IKIN	13	MAK
31-oct	2021	Sunday	3	AJMAQ	14	MAK
1-nov	2021	Monday	4	NO'J	15	MAK
2-nov	2021	Tuesday	5	TIJAX	16	MAK
3-nov	2021	Wednesday	6	KAWOQ	17	MAK
4-nov	2021	Thursday	7	AJPU'	18	MAK
5-nov	2021	Friday	8	IMOX	19	MAK
6-nov	2021	Saturday	9	IQ'	0	KANK'IN
7-nov	2021	Sunday	10	AQ'AB'AL	1	KANK'IN
8-nov	2021	Monday	11	K'AT	2	KANK'IN
9-nov	2021	Tuesday	12	KAN	3	KANK'IN
10-nov	2021	Wednesday	13	KEME	4	KANK'IN
11-nov	2021	Thursday	1	KEEJ	5	KANK'IN
12-nov	2021	Friday	2	Q'ANIL	6	KANK'IN
13-nov	2021	Saturday	3	TOJ	7	KANK'IN
14-nov	2021	Sunday	4	TZ'I'	8	KANK'IN
15-nov	2021	Monday	5	B'ATZ'	9	KANK'IN
16-nov	2021	Tuesday	6	E	10	KANK'IN
17-nov	2021	Wednesday	7	AJ	11	KANK'IN
18-nov	2021	Thursday	8	I'X	12	KANK'IN
19-nov	2021	Friday	9	TZ'IKIN	13	KANK'IN
20-nov	2021	Saturday	10	AJMAQ	14	KANK'IN
21-nov	2021	Sunday	11	NO'J	15	KANK'IN
22-nov	2021	Monday	12	TIJAX	16	KANK'IN
23-nov	2021	Tuesday	13	KAWOQ	17	KANK'IN
24-nov	2021	Wednesday	1	AJPU'	18	KANK'IN
25-nov	2021	Thursday	2	IMOX	19	KANK'IN
26-nov	2021	Friday	3	IQ'	0	NWA'N
27-nov	2021	Saturday	4	AQ'AB'AL	1	NWA'N
28-nov	2021	Sunday	5	K'AT	2	NWA'N
29-nov	2021	Monday	6	KAN	3	NWA'N
30-nov	2021	Tuesday	7	KEME	4	NWA'N
1-dic	2021	Wednesday	8	KEEJ	5	NWA'N
2-dic	2021	Thursday	9	Q'ANIL	6	NWA'N
3-dic	2021	Friday	10	TOJ	7	NWA'N
4-dic	2021	Saturday	11	TZ'I'	8	NWA'N
5-dic	2021	Sunday	12	B'ATZ'	9	NWA'N
6-dic	2021	Monday	13	E	10	NWA'N
7-dic	2021	Tuesday	1	AJ	11	NWA'N
8-dic	2021	Wednesday	2	I'X	12	NWA'N
9-dic	2021	Thursday	3	TZ'IKIN	13	NWA'N
10-dic	2021	Friday	4	AJMAQ	14	NWA'N
11-dic	2021	Saturday	5	NO'J	15	NWA'N
12-dic	2021	Sunday	6	TIJAX	16	NWA'N
13-dic	2021	Monday	7	KAWOQ	17	NWA'N
14-dic	2021	Tuesday	8	AJPU'	18	NWA'N
15-dic	2021	Wednesday	9	IMOX	19	NWA'N
16-dic	2021	Thursday	10	IQ'	0	PAX
17-dic	2021	Friday	11	AQ'AB'AL	1	PAX
18-dic	2021	Saturday	12	K'AT	2	PAX
19-dic	2021	Sunday	13	KAN	3	PAX
20-dic	2021	Monday	1	KEME	4	PAX
21-dic	2021	Tuesday	2	KEEJ	5	PAX
22-dic	2021	Wednesday	3	Q'ANIL	6	PAX
23-dic	2021	Thursday	4	TOJ	7	PAX
24-dic	2021	Friday	5	TZ'I'	8	PAX
25-dic	2021	Saturday	6	B'ATZ'	9	PAX
26-dic	2021	Sunday	7	E	10	PAX
27-dic	2021	Monday	8	AJ	11	PAX
28-dic	2021	Tuesday	9	I'X	12	PAX
29-dic	2021	Wednesday	10	TZ'IKIN	13	PAX
30-dic	2021	Thursday	11	AJMAQ	14	PAX
31-dic	2021	Friday	12	NO'J	15	PAX

1-ene	2022	Saturday	13	TIJAX	16	PAX
2-ene	2022	Sunday	1	KAWOQ	17	PAX
3-ene	2022	Monday	2	AJPU'	18	PAX
4-ene	2022	Tuesday	3	IMOX	19	PAX
5-ene	2022	Wednesday	4	IQ'	0	KAYAB'
6-ene	2022	Thursday	5	AQ'AB'AL	1	KAYAB'
7-ene	2022	Friday	6	K'AT	2	KAYAB'
8-ene	2022	Saturday	7	KAN	3	KAYAB'
9-ene	2022	Sunday	8	KEME	4	KAYAB'
10-ene	2022	Monday	9	KEEJ	5	KAYAB'
11-ene	2022	Tuesday	10	Q'ANIL	6	KAYAB'
12-ene	2022	Wednesday	11	TOJ	7	KAYAB'
13-ene	2022	Thursday	12	TZ'I'	8	KAYAB'
14-ene	2022	Friday	13	B'ATZ'	9	KAYAB'
15-ene	2022	Saturday	1	E	10	KAYAB'
16-ene	2022	Sunday	2	AJ	11	KAYAB'
17-ene	2022	Monday	3	I'X	12	KAYAB'
18-ene	2022	Tuesday	4	TZ'IKIN	13	KAYAB'
19-ene	2022	Wednesday	5	AJMAQ	14	KAYAB'
20-ene	2022	Thursday	6	NO'J	15	KAYAB'
21-ene	2022	Friday	7	TIJAX	16	KAYAB'
22-ene	2022	Saturday	8	KAWOQ	17	KAYAB'
23-ene	2022	Sunday	9	AJPU'	18	KAYAB'
24-ene	2022	Monday	10	IMOX	19	KAYAB'
25-ene	2022	Tuesday	11	IQ'	0	KUMK'U'
26-ene	2022	Wednesday	12	AQ'AB'AL	1	KUMK'U'
27-ene	2022	Thursday	13	K'AT	2	KUMK'U'
28-ene	2022	Friday	1	KAN	3	KUMK'U'
29-ene	2022	Saturday	2	KEME	4	KUMK'U'
30-ene	2022	Sunday	3	KEEJ	5	KUMK'U'
31-ene	2022	Monday	4	Q'ANIL	6	KUMK'U'
1-feb	2022	Tuesday	5	TOJ	7	KUMK'U'
2-feb	2022	Wednesday	6	TZ'I'	8	KUMK'U'
3-feb	2022	Thursday	7	B'ATZ'	9	KUMK'U'
4-feb	2022	Friday	8	E	10	KUMK'U'
5-feb	2022	Saturday	9	AJ	11	KUMK'U'
6-feb	2022	Sunday	10	I'X	12	KUMK'U'
7-feb	2022	Monday	11	TZ'IKIN	13	KUMK'U'
8-feb	2022	Tuesday	12	AJMAQ	14	KUMK'U'
9-feb	2022	Wednesday	13	NO'J	15	KUMK'U'
10-feb	2022	Thursday	1	TIJAX	16	KUMK'U'
11-feb	2022	Friday	2	KAWOQ	17	KUMK'U'
12-feb	2022	Saturday	3	AJPU'	18	KUMK'U'
13-feb	2022	Sunday	4	IMOX	19	KUMK'U'
14-feb	2022	Monday	5	IQ'	**0**	**WAYEB'**
15-feb	2022	Tuesday	6	AQ'AB'AL	**1**	**WAYEB'**
16-feb	2022	Wednesday	7	K'AT	**2**	**WAYEB'**
17-feb	2022	Thursday	8	KAN	**3**	**WAYEB'**
18-feb	2022	Friday	9	KEME	**4**	**WAYEB'**
19-feb	2022	Saturday	10	KEEJ	0	POP
20-feb	2022	Sunday	11	Q'ANIL	1	POP
21-feb	2022	Monday	12	TOJ	2	POP
22-feb	2022	Tuesday	13	TZ'I'	3	POP
23-feb	2022	Wednesday	1	B'ATZ'	4	POP
24-feb	2022	Thursday	2	E	5	POP
25-feb	2022	Friday	3	AJ	6	POP
26-feb	2022	Saturday	4	I'X	7	POP
27-feb	2022	Sunday	5	TZ'IKIN	8	POP
28-feb	2022	Monday	6	AJMAQ	9	POP
1-mar	2022	Tuesday	7	NO'J	10	POP
2-mar	2022	Wednesday	8	TIJAX	11	POP
3-mar	2022	Thursday	9	KAWOQ	12	POP
4-mar	2022	Friday	10	AJPU'	13	POP
5-mar	2022	Saturday	11	IMOX	14	POP
6-mar	2022	Sunday	12	IQ'	15	POP
7-mar	2022	Monday	13	AQ'AB'AL	16	POP
8-mar	2022	Tuesday	1	K'AT	17	POP
9-mar	2022	Wednesday	2	KAN	18	POP
10-mar	2022	Thursday	3	KEME	19	POP
11-mar	2022	Friday	4	KEEJ	0	WO
12-mar	2022	Saturday	5	Q'ANIL	1	WO
13-mar	2022	Sunday	6	TOJ	2	WO
14-mar	2022	Monday	7	TZ'I'	3	WO
15-mar	2022	Tuesday	8	B'ATZ'	4	WO
16-mar	2022	Wednesday	9	E	5	WO
17-mar	2022	Thursday	10	AJ	6	WO
18-mar	2022	Friday	11	I'X	7	WO
19-mar	2022	Saturday	12	TZ'IKIN	8	WO
20-mar	2022	Sunday	13	AJMAQ	9	WO
21-mar	2022	Monday	1	NO'J	10	WO
22-mar	2022	Tuesday	2	TIJAX	11	WO
23-mar	2022	Wednesday	3	KAWOQ	12	WO
24-mar	2022	Thursday	4	AJPU'	13	WO
25-mar	2022	Friday	5	IMOX	14	WO
26-mar	2022	Saturday	6	IQ'	15	WO
27-mar	2022	Sunday	7	AQ'AB'AL	16	WO
28-mar	2022	Monday	8	K'AT	17	WO
29-mar	2022	Tuesday	9	KAN	18	WO
30-mar	2022	Wednesday	10	KEME	19	WO
31-mar	2022	Thursday	11	KEEJ	0	SIP

Cholq'ij, Maya Lunar or Solar Calendar

The etymology of Cholq'ij can be understood as "to order the days properly." This means that it is not enough to just arrange the days in a basic sequence; instead, they need to be "properly ordered" or rigorously grouped to explain their utility and application for constructing the balance and harmony of both individual and collective human life. Cholq'ij, in the K'iche' Mayan area, refers to the instrument for time computation and day registration, in accordance with the "nine lunations" or cycles that Watit, our grandmother moon, completes around the Earth over a period calculated as 260 days.

After rigorous observation processes about the correlation between the moon and nature, particularly with humans, it becomes important to explain the indestructible Moon-Woman unity, as it determines female functions. In this regard, in oral tradition, grandparents communicate that this way of counting time embodies feminine energy. So much so that in the collective imagination, when discussing this calendar, it is expressed: "Ri cholq'ij are ixoq'": this calendar is woman.

Modern anthropology, or Western-style anthropology, conceptualizes this way of counting time through the name Tzolkin, a term taken from the Yucatec Maya language. This calendar is currently in use and cultivated by large human conglomerates of the Maya society. It is enough to approach the internet to see how many alternatives there are for obtaining information. However, much of that information has been misrepresented and heavily commercialized by people and institutions from other cultures.

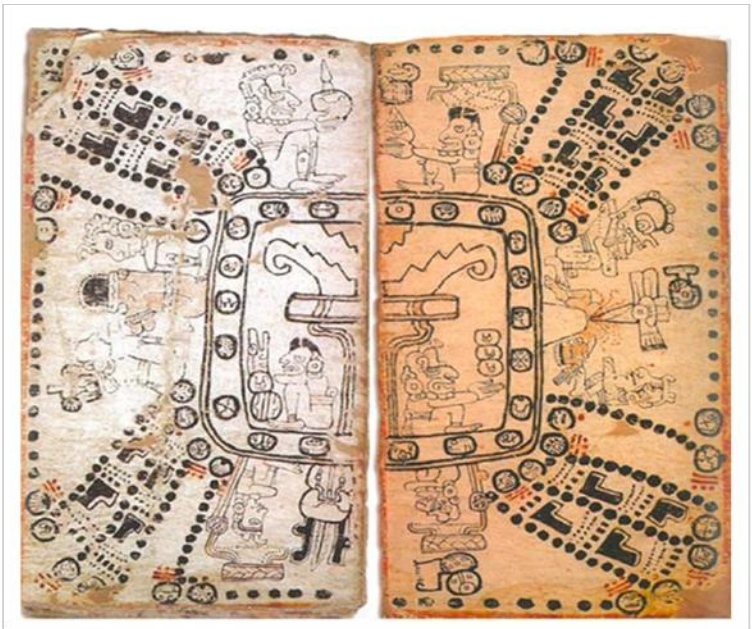
The truth is that, at present, the Cholq'ij has sparked curiosity and interest in understanding its configuration, meanings, and application among universities in other regions and foreign researchers. It is also, in some way, studied within the official education system of Guatemala, from primary and secondary to higher education. Nevertheless, there is a limitation in preventing the involvement of the AJq'ijab'—Maya timekeepers—who, as continuers of the practice of interpreting its meaning, structure, decoding of nawales, and its application to life, still rigorously maintain its relevance.

Precisely, we consider it extremely important to recognize, in the highest regard, the ancient grandmothers and grandfathers, both distant and near, for their unwavering responsibility and dignity in preserving and communicating this knowledge during the most challenging times of colonization; during periods of repression, persecution, and disdain in the "republican" era. Despite lacking academic titles and written methods to transfer or preserve this knowledge, they maintained the Mayan science of time through their own forms of guardianship and resistance: thought, heart, feelings of belonging, and the fingers of their

hands and feet. Thus, the exploits of colonization were unable to reach them. Thus, as we enter the 21st century, we present the scientific foundation of the Cholq'ij, communicated by the worthy heroes and heroines of our epistemology, with dignity and completeness.

We will now proceed to present the content of the Cholq'ij in the manner in which the grandmothers and grandfathers, the ajq'ijab', continue to communicate it within the family, community, and social settings, with simplicity. However, this does not mean distancing from the scientific rigor—as we understand it within Mesoamerican knowledge—or from the mysticism and philosophy that inspires the Mayan trajectory. If science is characterized by its simplicity, the pedagogies of the ajq'ijab' in relation to the Cholq'ij are easily comprehensible and immediately learnable, regardless of the level of instruction or "education" that people may have. In principle, it is necessary to point out that the configuration of the 260 days consists of twenty trecenas or thirteen veintenas, that is, the twenty nawales traverse the numerical scale from one to thirteen during the cycle, as will be shown. The only complete image of the Choq'ij that is preserved is contained in the so-called Madrid Codex, on pages 75 and 76. In these pages, one can identify, in the inner box, the glyphs of the twenty nawales which we will explain in detail.

The characters located in the four realms represent the four corners of the universe—the external or outside—and in current cosmogonic practices are invoked as follows: Relb'al Q'ij, the side where the sun rises. Q'ajb'al Q'ij, the side where the sun sets. Pu qakikab' Ri Kaj the right side of the sky, Pu Mox Ri Kaj the left side of the sky. The fundamental reference is that, in orienting the four directions, the invoker must face the place where the sun rises. Although due to the antiquity of the codex, the points it contains cannot be completely distinguished: twenty trecenas that sum up to the 260 days that the Cholq'ij has.



To understand the configuration of the Cholq'ij, that is, the combination of the twenty nawales with the series or trecenas of numerals, a current graphical representation is shown:

CHOLQ'IJ SACRED CALENDAR COMPRISED OF 260 DAYS

	a	b	c	d	e	f	g	h	i	j	k	l	m
B'ATZ'	1	8	2	9	3	10	4	11	5	12	6	13	7
E	2	9	3	10	4	11	5	12	6	13	7	1	8
AJ	3	10	4	11	5	12	6	13	7	1	8	2	9
I'X	4	11	5	12	6	13	7	1	8	2	9	3	10
TZ IK IN	5	12	6	13	7	1	8	2	9	3	10	4	11
AJMAQ	6	13	7	1	8	2	9	3	10	4	11	5	12
NO'J	7	1	8	2	9	3	10	4	11	5	12	6	13
TIJAX	8	2	9	3	10	4	11	5	12	6	13	7	1
KAWOQ	9	3	10	4	11	5	12	6	13	7	1	8	2
AJPU	10	4	11	5	12	6	13	7	1	8	2	9	3
IMOX	11	5	12	6	13	7	1	8	2	9	3	10	4
IQ'	12	6	13	7	1	8	2	9	3	10	4	11	5
AQ'AB'AL	13	7	1	8	2	9	3	10	4	11	5	12	6
K'AT	1	8	2	9	3	10	4	11	5	12	6	13	7
KAN	2	9	3	10	4	11	5	12	6	13	7	1	8
KEME	3	10	4	11	5	12	6	13	7	1	8	2	9
KEEJ	4	11	5	12	6	13	7	1	8	2	9	3	10
Q'ANIL	5	12	6	13	7	1	8	2	9	3	10	4	11
TOJ	6	13	7	1	8	2	9	3	10	4	11	5	12
TZ'I'	7	1	8	2	9	3	10	4	11	5	12	6	13

In the left column are the names of the twenty nawales and in colors, each of the thirteen numerical scales that each one traverses, to complete the twenty trecenas, so that during the 260 days the same number does not repeat in each nawal. Although it may seem repetitive, it is necessary and honorable to acknowledge the skill, capability, and dignity of the grandmothers and grandfathers ajq'ijab' in these lands for maintaining, practicing, and transmitting the teachings of the Cholq'ij, without external documents or supports for this purpose, because they never had or knew the so-called codices. The codex containing this calendar was identified as such in 1888, after being divided and in different hands. Currently, it is located in the Museum of the Americas in Madrid, Spain.

The Counting of the Cholq'ij

The method of counting the days of each nawal with the numeral of the Cholq'ij is explained logically and simply below. While tables with Arabic numerals have been created, it is suggested, as a form of cultural appreciation, to learn the nawales and numbers in the K'iche' Maya language, with their correct pronunciation.

Numbers used in the counting of the trecenas:

Maya K´iche´	Number
JUN	1
KYEB´	2
OXIB´	3
KEEJEB´	4
JOB´	5
WAQ´IB´	6
WUQ´UB´	7
WAJXAQ´IB´	8
B´ELEJEB´	9
LAJUJ	10
JU´LAJUJ	11
KAB´LAJUJ	12
OXLAJUJ	13

In the table, the numbers 2 and 4 are written in the dialectal variant of Xejajuj No'j. However, in various linguistic communities of the K'iche' area, they are pronounced: KAIB' for two and KAJIB' for four.

When "reading" the 20 nawales, the number is pronounced first, followed by the name of each nawal, for example: Jun B'atz'; Keeb' E; Oxib' Aj; Keejeb' I'x; Job' Tzikin; Waq'ib' Ajmaq; Wukub' No'j; Wajxaq'ib' Tijax; B'elejeb' Kawoq; Lajuj Ajpú; Ju'lajuj Imox; Kab'lajuj Iq'; Oxlajuj Aq'ab'al; Jun K'at; Keeb' Kan; Oxib' Keme; Keejeb' Keej; Job' Q'anil; Waq'ib' Toj; Wuq'ub' Tz'i'. The following chart shows the logical order of nawales and numerals -trecenas-, in the first and second columns, with Arabic numbers. The names, in the third and fourth columns with Mayan numbers, and the glyphs of each nawal:

NUMBER	NAWAL	No. MAYA	GLYPH
1	B´ATZ´	•	
2	E	••	
3	AJ	•••	
4	I´X	••••	
5	TZ´IKIN	—	
6	AJMAQ	—•	
7	NO´J	—••	
8	TIJAX	—•••	
9	KAWOQ	—••••	
10	AJPÚ	=	
11	IMOX	=•	
12	IQ´	=••	
13	AQ´ABÁL	=•••	
1	K´AT	•	
2	KAN	••	
3	KEME	•••	
4	KEEJ	••••	
5	Q´ANIL	—	
6	TOJ	—•	
7	TZ´I´	—••	

It is important to note that when the count from one to thirteen ends, a new trecena begins, until twenty trecenas are completed, during the 260 days of each Cholq'ij cycle. The same happens with the veintenas of nawales, when Tz'i' ends, B'atz' starts again until thirteen veintenas are completed.

	a	b	c	d	e	f	g	h	i	j	k	l	m
B´ATZ´	1	8	2	9	3	10	4	11	5	12	6	13	7
E	2	9	3	10	4	11	5	12	6	13	7	1	8
AJ	3	10	4	11	5	12	6	13	7	1	8	2	9
I'X	4	11	5	12	6	13	7	1	8	2	9	3	10
TZ'IKIN	5	12	6	13	7	1	8	2	9	3	10	4	11
AJMAQ	6	13	7	1	8	2	9	3	10	4	11	5	12
NO'J	7	1	8	2	9	3	10	4	11	5	12	6	13
TIJAX	8	2	9	3	10	4	11	5	12	6	13	7	1
KAWOQ	9	3	10	4	11	5	12	6	13	7	1	8	2
AJPU	10	4	11	5	12	6	13	7	1	8	2	9	3
IMOX	11	5	12	6	13	7	1	8	2	9	3	10	4
IQ'	12	6	13	7	1	8	2	9	3	10	4	11	5
AQ'AB'AL	13	7	1	8	2	9	3	10	4	11	5	12	6
K'AT	1	8	2	9	3	10	4	11	5	12	6	13	7
KAN	2	9	3	10	4	11	5	12	6	13	7	1	8
KEME	3	10	4	11	5	12	6	13	7	1	8	2	9
KEEJ	4	11	5	12	6	13	7	1	8	2	9	3	10
Q'ANIL	5	12	6	13	7	1	8	2	9	3	10	4	11
TOJ	6	13	7	1	8	2	9	3	10	4	11	5	12
TZ'I'	7	1	8	2	9	3	10	4	11	5	12	6	13

According to the chart, the reading direction is from top to bottom. In the first column, each nawal is assigned a number which is read in the same way, from top to bottom, so that each nawal traverses the numerical scale from 1 to 13 over the course of the 260 days in the wave-like motion of the serpent.

No number is repeated with the same nawal.

As explained earlier, the reading order is from the first column (a) from top to bottom—with each nawal—continuing with the next column (b) from top to bottom, and so on until completing the thirteen months.

For better understanding, in the chart each trecena has a color.

Reiterating, it is necessary to present an example of the correlation of the veintenas of nawales and the trecenas of numerals:

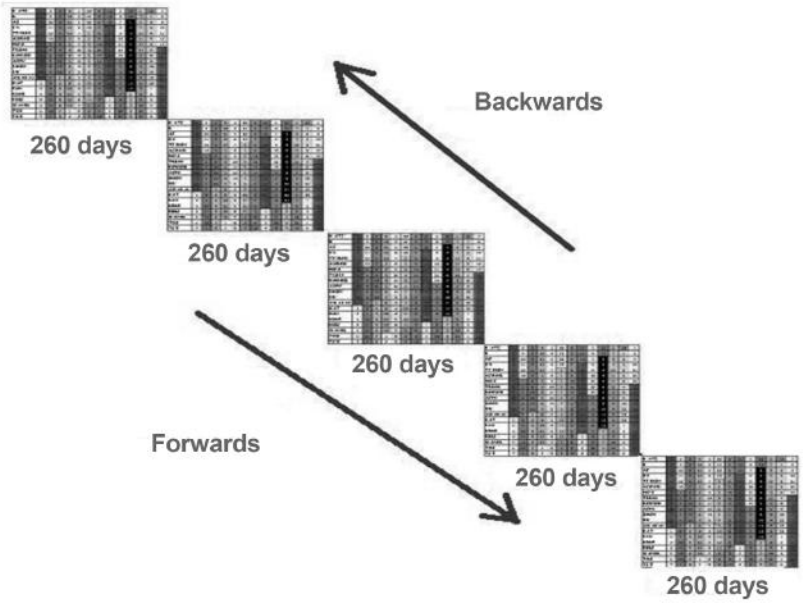
	NUMERAL		NAWAL	
First series of 13 numerals	1		B'ATZ'	First twenty Nawales
	2		E	
	3		AJ	
	4		I'X	
	5		TZ'IKIN	
	6		AJMAQ	
	7		NO'J	
	8		TIJAX	
	9		KAWOQ	
	10		AJPU'	
	11		IMOX	
	12		IQ'	
	13		AQ'AB'AL	
Second series of 13 numberals	1		K'AT	
	2		KAN	
	3		KEME	
	4		KEEJ	
	5		Q'ANIL	
	6		TOJ	
	7		TZ'I'	
	8		B'ATZ'	Second twenty Nawales
	9		E	
	10		AJ	
	11		I'X	
	12		TZ'IKIN	
	13		AJMAQ	
Third series of 13 numerals	1		NO'J	
	2		TIJAX	
	3		KAWOQ	
	4		AJPU'	
	5		IMOX	
	6		IQ'	
	7		AQ'AB'AL	
	8		K'AT	
	9		KAN	
	10		KEME	
	11		KEEJ	

	12		Q'ANIL	
	13		TOJ	
Fourth series of 13 numerals	1		TZ'I'	
	2		B'ATZ'	Third twenty Nawales
	3		E	
	4		AJ	
	5		I'X	
	6		TZ'IKIN	
	7		AJMAQ	
	8		NO'J	
	9		TIJAX	
	10		KAWOQ	
	11		AJPU'	
	12		IMOX	
	13		IQ'	
Fifth series of 13 numerals	1		AQ'AB'AL	
	2		K'AT	
	3		KAN	
	4		KEME	
	5		KEEJ	
	6		Q'ANIL	
	7		TOJ	
	8		TZ'I'	
	9		B'ATZ'	Fourth twenty Nawales
	10		E	
	11		AJ	
	12		I'X	
	13		TZ'IKIN	
Sixth series of 13 numerals	1		AJMAQ	
	2		NO'J	
	3		TIJAX	
	4		KAWOQ	
	5		AJPU'	
	6		IMOX	
	7		IQ'	
	8		AQ'AB'AL	
	9		K'AT	
	10		KAN	
	11		KEME	
	12		KEEJ	
	13		Q'ANIL	
Seventh series of 13 numerals	1		TOJ	
	2		TZ'I'	
	3		B'ATZ'	Fourth twenty Nawales
	4		E	
	5		AJ	
	6		I'X	
	7		TZ'IKIN	
	8		AJMAQ	
	9		NO'J	
	10		TIJAX	
	11		KAWOQ	
	12		AJPU'	
	13		IMOX	

Eighth series of 13 numerals	1		IQ'	
	2		AQ'AB'AL	
	3		K'AT	
	4		KAN	
	5		KEME	
	6		KEEJ	
	7		Q'ANIL	
	8		TOJ	
	9		TZ'I'	
	10		B'ATZ'	Until completing 13 cycles of Nawales
	11		E	
	12		AJ	
	13		I'X	
Until completing 20 cycles of numerals	1		TZ'IKIN	
	2		AJMAQ	
	3		NO'J	
	4		TIJAX	
	5		KAWOQ	
	6		AJPU'	
	7		IMOX	
	8		IQ'	

Based on the above, the CHOLQ'IJ or the sacred Mayan lunar calendar consists of 260-day cycles in which veintenas and trecenas are combined. When one cycle ends, another one begins, and this continues infinitely in this manner of counting time day by day, which the AJQ'IJAB' correctly perform and interpret.

A graph is shown as an example:



Configuration and Explanation of the Cholq'ij

The cholq'ij, explained through the daily oral traditions flowing from the hearts of the grandmothers and grandfathers, is conceived in relation to:

"The time it takes for the moon to circle the earth nine times, which is why it is of feminine energy."

"The period of human gestation, from conception to birth."

"The cycle of planting, cultivating, and harvesting the Sacred Maize. One harvest in cold land (highlands) and two harvests in hot land (coast)."

The basis of the cholq'ij is each "lunation" or the time between each menstruation.

"To learn and keep track of the cholq'ij, you must use the instruments your body has, your fingers and your joints."

"The cholq'ij is also preserved and explained in the weavings."

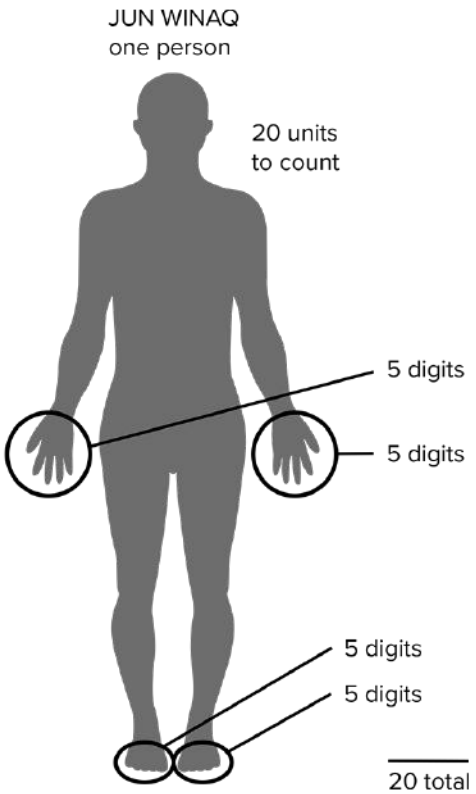
"The cholq'ij is explained in ancient constructions."

Three current cultural manifestations are presented where elements of the cholq'ij have been preserved in a coded form, which will now be explained.

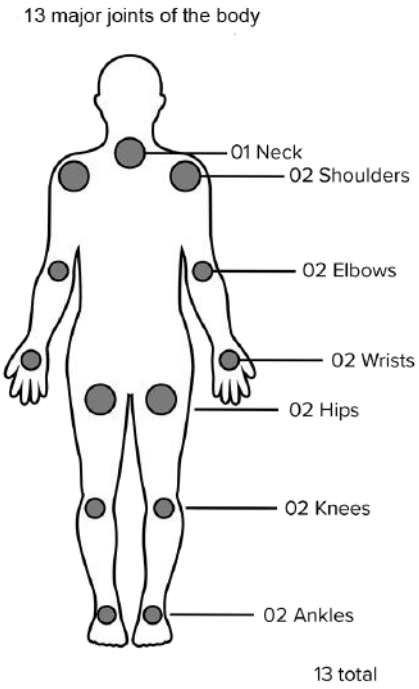
Maya Homogenetics

The venerable Kamalb'e and Maya K'iche' ajq'ij, Don Adrián Inés Chávez, taught that Maya homogenetics has its origin in the human being. As explained in the Maya numeration and mathematical system, the person, Jun Winaq, represents the number 20 and oxlajuj, the number 13, contained within the body, that is, the veintenas and trecenas are found within the body.

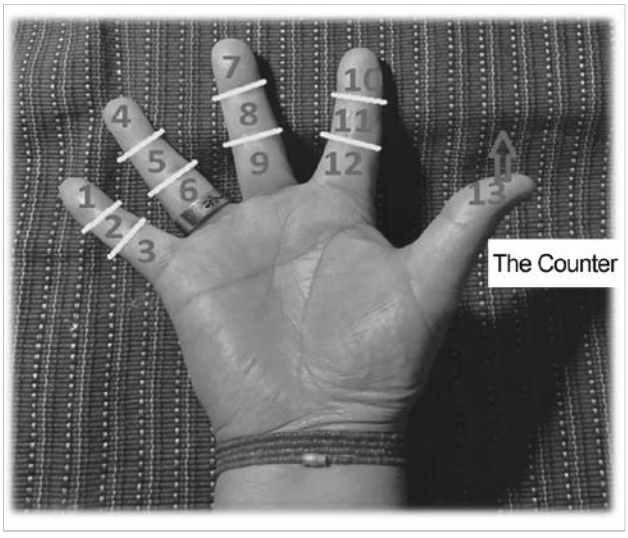
To learn the twenty nawales of the Cholq'ij, the fingers of the hands and feet are used, five on each hand and five on each foot, for a total of 20. When teaching, the AJQ'IJAB' says: "*Learn five nawales first, count them with the fingers of your right hand, B'atz, E, Aj, I'x, Tzikin. Then with your left hand—and then with one foot and then the other—to complete the twenty and learn the order.*"



To count the thirteens, the major joints of the body, or articulations as the grandmothers and grandfathers call them, are used: "two in the ankles, two in the knees, two in the hips, two in the wrists, two in the elbows, two in the shoulders, and one in the neck, making a total of thirteen."

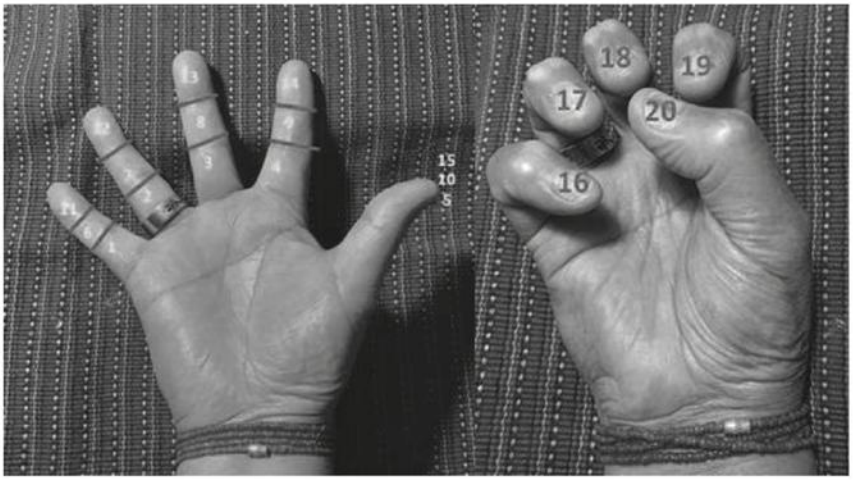


Another way to find instruments for counting according to Maya homogenetics is using the fingers of the hands. The count of thirteen is done with the phalanges, or as the grandmothers and grandfathers say: "the little bones," three phalanges in each finger. The index, middle, ring, and little fingers add up to twelve in total, with the "counter" or thumb counting only once because it cannot count itself. The count is done vertically, as shown in the image below:



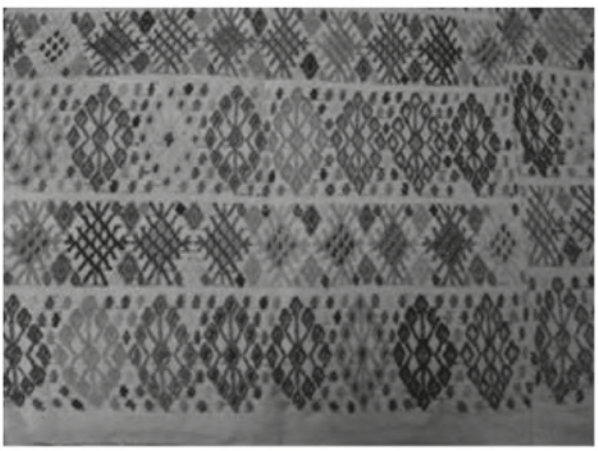
The count of 20 horizontally is done by counting in a horizontal manner. In the image, the count is shown by levels from one to five, starting with the four lower phalanges; the fifth is the "counter" or thumb. The second count comprises the

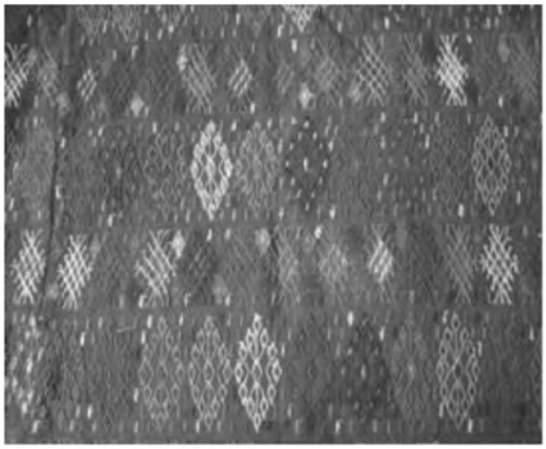
middle phalanges from six to nine. The ten will always be the “counter.” The third level consists of the upper phalanges, from eleven to fourteen, and fifteen being the “counter.” The final count includes the nails from sixteen to nineteen, with twenty as the “counter” that, when counting, compels the closing of the fist.

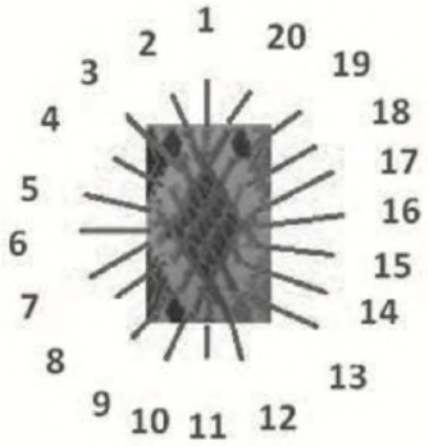


Another way to keep the accounts was done in the weavings; here, the concept of “encoding” knowledge fits very well, because to rediscover them one must have a clear understanding of the cholq’ij count. Otherwise, it remains merely as an admiration of textile art.

Shown here are pot, or güipiles from the Q'eq'chi' Maya, which contain everything related to the counts of the veintenas and trecenas:

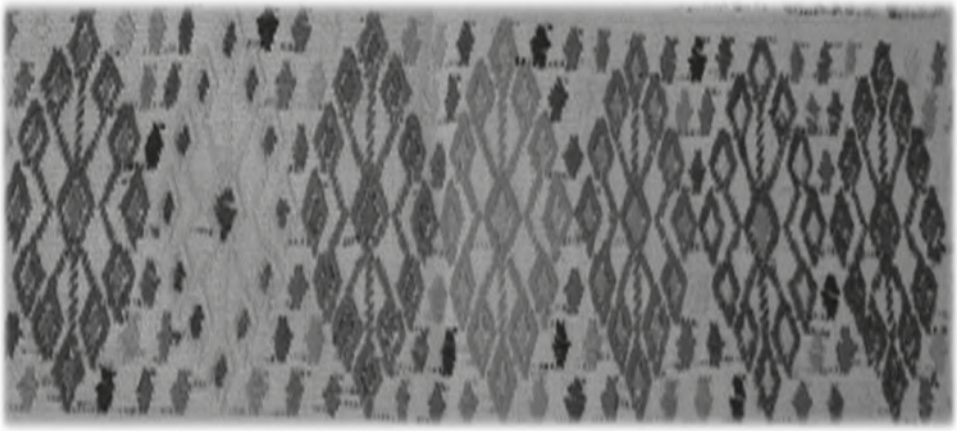


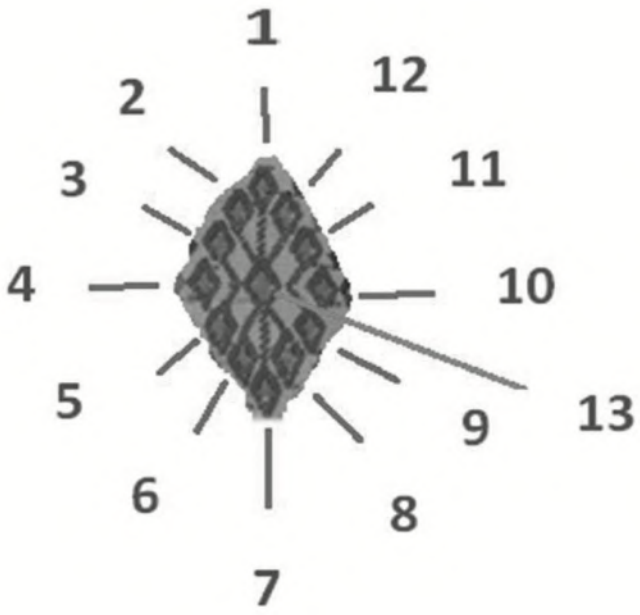




The ends or edges of each rhombus consist of twenty lines.

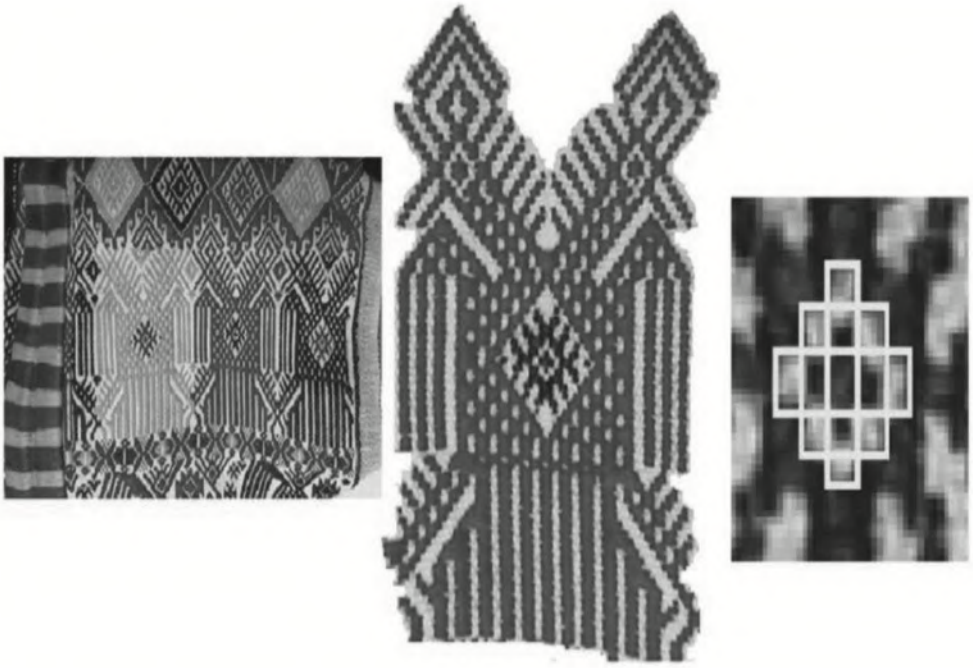
The same Q’eq’chi’ Maya pot or güipil contains everything related to the count of thirteen cycles in the rhombuses



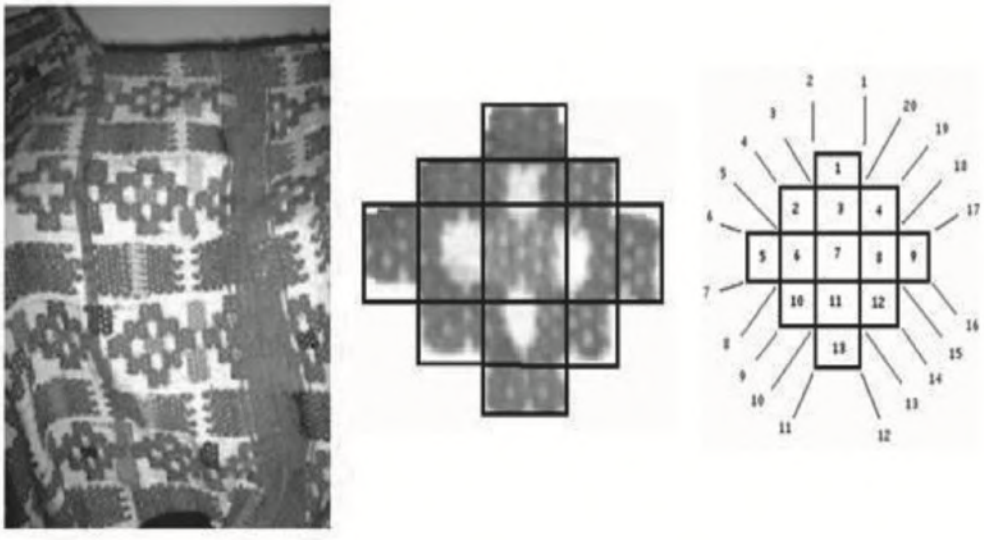


The total number of rhombuses in the weaving is 13 -trecenas-.

Pot or güipil of Xelajuj No'j, Quetzaltenango:

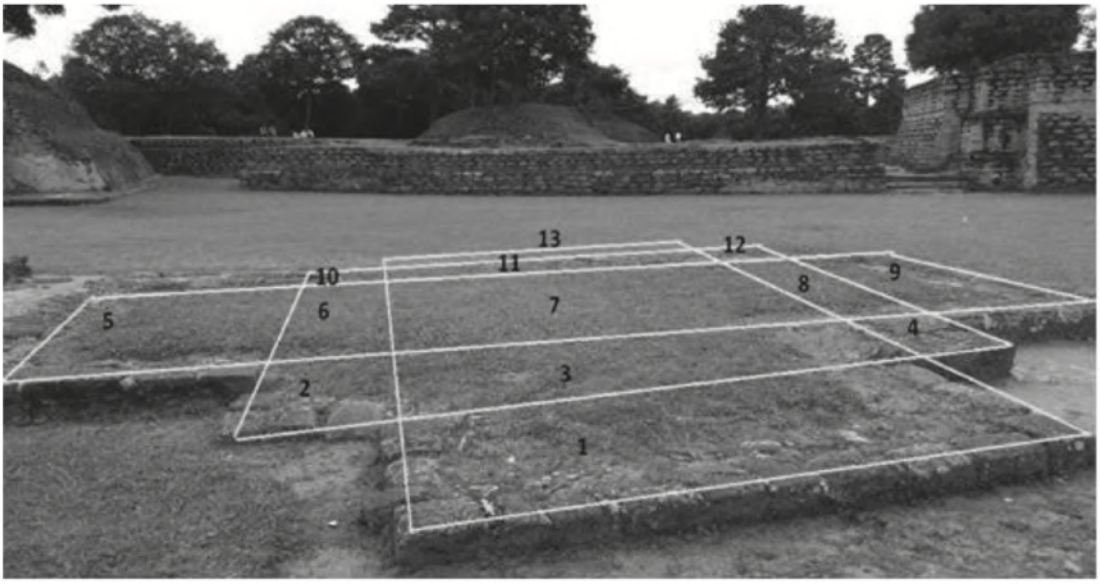


Pot or Güipil of Santiago Sacatepéquez:

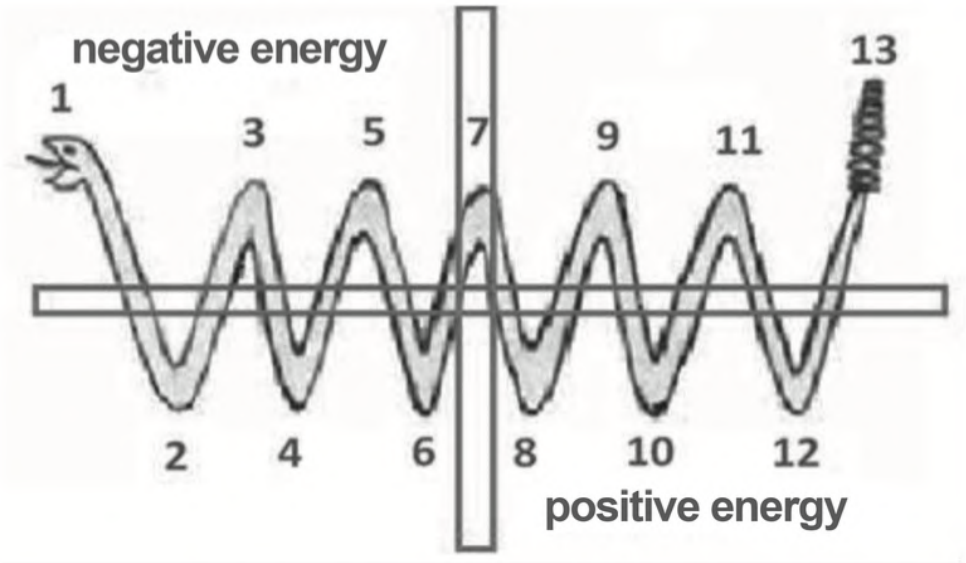


The pots presented above show the thirteen squares and the twenty angles—open or closed—that reference 20 x 13 = 260 days of the cholq'ij.

The third piece of evidence for the relationship of the cholq'ij with the daily life of the Maya people can be seen in the architectural designs in Iximché, where 13 squares and 20 angles are found, 13 x 20 = 260 in the constructions:



Additionally, the Thirteens is depicted below, interpreted from the kumatzin, or rattlesnake.



It is important to mention that the women and men who are timekeepers are the ones who, in the depths of their hearts, have preserved, practiced, and taught philosophy and spirituality. Often condemned, scorned, singled out, or discriminated against for their practices, the majority of these individuals are unaware of the codices' existence.

However, their connection to the ancient collective memory has allowed them to delve deeply into the knowledge of Maya culture and civilization. It is always necessary to recognize the silent work and resistance they have carried out so that current generations can find the Maya culture and the count of time alive and vigorous.

The Nawales and Surnames

In the responsibility of rediscovering the knowledge of the ancestors and the cholq'ij, it is crucial to note that the twenty nawales are present in the social life of contemporary generations. They significantly strengthen cultural identity, especially concerning surnames, as we observe in the following chart:

NAWAL	Current Writing
B´ATZ´	BATZ
E	¿?
AJ	AJ
I´X	¿?
TZIKIN	TZIQUIN
AJMAQ	AJMAC
NO´J	NOJ
TIJAX	TEJASH
KAWOQ	¿?
AJPÚ	AJPU
IMOX	¿?
IQ´	IC
AQ´AB´AL	ACABAL
K´AT	¿?
KAN	CAN
KEME	QUEMÉ
KEEJ	QUIEJ
Q´ANIL	CANIL
TOJ	TOJ
TZ´I´	TZI

The five surnames marked in the previous chart with question marks (¿?) could not be identified in present usage, except perhaps under different pronunciations or in other Mayan languages.

Due to the disrespect and racist discrimination faced regularly within the national public administration, these surnames have been written with significant errors or at the whim of civil registrars or municipal secretaries, both during the colonial and republican periods.

This trend continues today in the activities of the National Registry of Persons. Grandfather ajq'ij Gregorio Camacho Leiva narrated the following institutional tale of vilification: "The surname Tzikin was hispanicized because when our brothers went to register their children's names, they encountered the absurd personal interpretations of the registrars.

Such is the case of Mr. Juan Tzikin. When he went to the proper institution to register his child's birth, the registrar asked him:

'*What will you name your child?*'

Mr. Juan replied: '*Juan Tzikin*.'

'*What does Tzikin mean?*' the registrar asked.

'*It means bird and is one of the nawales.*' Mr. Juan replied.

'*Your surname is ugly*' said the registrant, implying that in colloquial hispanicized speech, Tzikin has a pejorative connotation, referring to the male reproductive organ.

'*We'd better call him Pajarito (little bird), that's nicer.*' decided the registrar.

Thus, the child was assigned the name Juan Pajarito, unilaterally and arbitrarily by the public employee. Hispanicizing Mayan names has been one of the many abuses committed against Maya society through public servants who whimsically named boys and girls as they saw fit. On many occasions, they used the Catholic calendar of saints for this purpose.

Consequently, as previously explained, it can be argued that some surnames have undergone linguistic corruption by being forced into hispanicized writing.

For example: the surname Quijivix from Xelajuj No'j, originating from the Cholq'ij days Keejeb' I'x or Kajib' I'x, which underwent transformations and reductions until it became Quijivix.

Application of the Cholq'ij

According to this relationship, the particularities and utilities of counting, organizing, and explaining the intimate energetic correspondence contained within the days, and its relationship with the individual and collective lives of people, we can observe this complex configuration from two important areas:

A profound connection exists between human beings and the ecosystem, where each of the days or nawales constitutes analogies, parallels, or relationships with nature, whether with animals, plants, minerals, or other vibrant estimations in the universe. This connection takes into account specific times for giving thanks, healing physical and emotional ailments; initiating new paths or projects; and privileged moments for prayers for the material well-being of individuals, families, and society, all in accordance with the "energy" or "gift" of each day.

Moreover, from the understanding of Uwach Uq'ij, or the peculiar characteristic that governs the configuration of the nine nawales encompassing the character and personality of each individual, we see that the conjunction of these nine nawales, which make life meaningful, is decisive in constructing a full life. Each day has natural particularities, and its interaction with human beings creates all the conditions necessary to ascertain predispositions that may contribute to the emergence of talents, gifts, and missions throughout the duration of one's life, as noted by ajq'ijab':

"It is a matter of investigating which are the positive personality traits."

The truth is that each day possesses its "load" or natural traits which, if neglected, can cause imbalances and inconveniences. Hence, neglecting the divorce from the ecosystem leads to issues responsible for the surfacing of "negative traits" that influence the course of people's lives, counter to their well-being.

In the remote and recent past, the cholq'ij or sacred lunar calendar has guided people's lives towards building a full and harmonious life with themselves, their families, and society. Therefore, this philosophy of life allows for the understanding of the particularities of each nawal, guiding the full construction of a useful life; not only for each individual but also for the generation of harmonious and balanced relationships among human beings.

At this point in the discourse, we consider it appropriate to emphasize that the content of the present work is argued based on the oral knowledge maintained

and daily communicated by the ajq'ijab in the tradition of the highland Maya K'iche' region, particularly from Xelajuj No'j. This has been observed in the past, in the present, and towards the future, with the novelty of exercising their own cultural possibilities and resources, even amidst the disqualification by the institutional system and the different religious currents that consider this way of guiding life as satanic acts or witchcraft, without understanding the deep content of the Mayan cosmogony. This rich tradition has, along with its particularities, given rise to other significant cultures on the planet.

Moreover, such disqualifications also occur in national academia, which tends to be anthropocentric, attempting to subject our epistemologies to the "scientific" standards of Western science. This adherence to the exclusive use of rationalism and the deterministic concept of time leads such academic institutions to view our concepts of unpredictability and indetermination regarding time as fatalistic and indeterminate practices. These preconceptions stem from a refusal to understand, investigate, and listen to those who have cultivated and maintained this knowledge: the talents we recognize as ajq'ijab'.

The aforementioned contrasts with the germination of the academic cultural seed, driven by the Departments of Postgraduate Studies of the Western University Center, of the University of San Carlos of Guatemala, which, in an act of recognition, reconciliation with Guatemala's historical past, and restitution of the dignity of the knowledge of Mayan culture, published this document as a prominent piece of knowledge from the Course of Updating for Maya Timekeepers, developed between February and May of 2021.

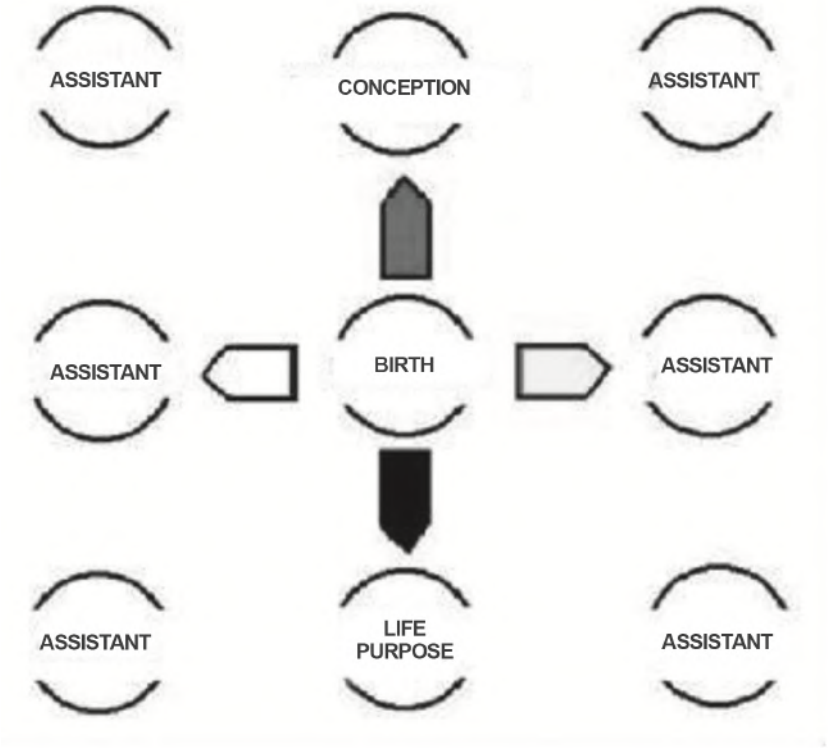
The Nine Lunations

To establish the configuration of the nine lunations for each person, the ajq'ijab' continue to use the dynamic of "counting" the time of the Cholq'ij with their fingers. This practice allows them to generate perceptions about the characteristics, talents, and limitations of each individual, guiding them on their path to personal regeneration. Consequently, analyses of personality, relationships with the ecosystem, cultural advice, and actions all flow from this practice, ultimately aiming for balance and harmony between each person and their alignment with the nawal.

The steps for the construction and understanding of the nine lunations begin with the comprehension of the uwach uq'ij or nawal of a person's birth through the following steps:

The nawal and numeral of the day on which the person was born are established. Until recently, this was done by “reversing the time” using methods specific to each ajq’ijab’. Some of these methods, which involved using their Tzite’ - 260 seeds provided for making predictions - or corn seeds, have been lost. I have observed at least one elder practicing this system, without the opportunity to ask questions and learn. Currently, there are many alternatives or applications that allow for the establishment of the birth nawal based on the date of birth and a 24-hour range.

Once the birth nawal is established, a type of graphical elaboration is then constructed as follows:



To establish the nawal of conception, nine days are counted backward from the day of birth; in the example, the nawal 8 B’atz’ is used, with the count indicated in green.

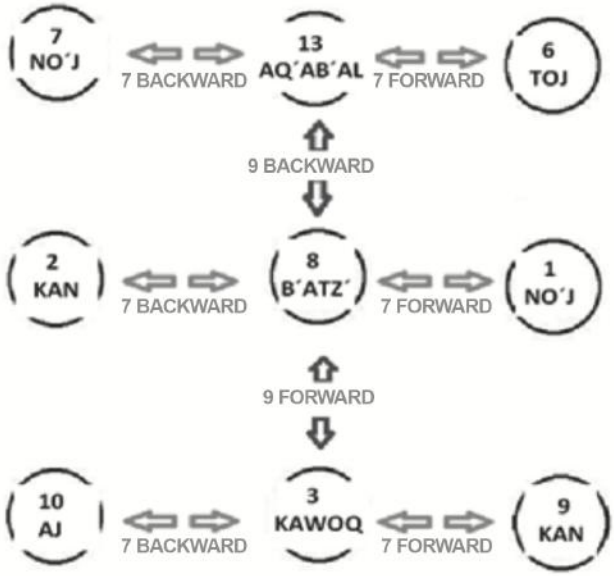
To establish the nawal of destiny or life mission, nine days are counted forward from the birth, and the following chart shows the example, with the count highlighted in yellow. Always count the full nine, including the day of birth.

B'ATZ'	1	8	2	9	3	10	4	11	5	12	6	13	7
E	2	9	3	10	4	11	5	12	6	13	7	1	8
AJ	3	10	4	11	5	12	6	13	7	1	8	2	9
I'X	4	11	5	12	6	13	7	1	8	2	9	3	10
TZ'IK'IN	5	12	6	13	7	1	8	2	9	3	10	4	11
AJMAQ	6	13	7	1	8	2	9	3	10	4	11	5	12
NO'J	7	1	8	2	9	3	10	4	11	5	12	6	13
TIJAX	8	2	9	3	10	4	11	5	12	6	13	7	1
KAWOQ	9	3	10	4	11	5	12	6	13	7	1	8	2
AJPU	10	4	11	5	12	6	13	7	1	8	2	9	3
IMOX	11	5	12	6	13	7	1	8	2	9	3	10	4
IQ'	12	6	13	7	1	8	2	9	3	10	4	11	5
AQ'AB'AL	13	7	1	8	2	9	3	10	4	11	5	12	6
K'AT	1	8	2	9	3	10	4	11	5	12	6	13	7
KAN	2	9	3	10	4	11	5	12	6	13	7	1	8
KEME	3	10	4	11	5	12	6	13	7	1	8	2	9
KYEJ	4	11	5	12	6	13	7	1	8	2	9	3	10
Q'ANIL	5	12	6	13	7	1	8	2	9	3	10	4	11
TOJ	6	13	7	1	8	2	9	3	10	4	11	5	12
TZ'I'	7	1	8	2	9	3	10	4	11	5	12	6	13

B'ATZ'	1	8	2	9	3	10	4	11	5	12	6	13	7
E	2	9	3	10	4	11	5	12	6	13	7	1	8
AJ	3	10	4	11	5	12	6	13	7	1	8	2	9
I'X	4	11	5	12	6	13	7	1	8	2	9	3	10
TZ'IK'IN	5	12	6	13	7	1	8	2	9	3	10	4	11
AJMAQ	6	13	7	1	8	2	9	3	10	4	11	5	12
NO'J	7	1	8	2	9	3	10	4	11	5	12	6	13
TIJAX	8	2	9	3	10	4	11	5	12	6	13	7	1
KAWOQ	9	3	10	4	11	5	12	6	13	7	1	8	2
AJPU	10	4	11	5	12	6	13	7	1	8	2	9	3
IMOX	11	5	12	6	13	7	1	8	2	9	3	10	4
IQ'	12	6	13	7	1	8	2	9	3	10	4	11	5
AQ'AB'AL	13	7	1	8	2	9	3	10	4	11	5	12	6
K'AT	1	8	2	9	3	10	4	11	5	12	6	13	7
KAN	2	9	3	10	4	11	5	12	6	13	7	1	8
KEME	3	10	4	11	5	12	6	13	7	1	8	2	9
KYEJ	4	11	5	12	6	13	7	1	8	2	9	3	10
Q'ANIL	5	12	6	13	7	1	8	2	9	3	10	4	11
TOJ	6	13	7	1	8	2	9	3	10	4	11	5	12
TZ'I'	7	1	8	2	9	3	10	4	11	5	12	6	13

Nine backwards for conception (left) Nine forward for destiny or mission (right)

To find the auxiliary nawales for conception, birth, and destiny or mission, only 7 days are counted forward and 7 days backward to configure the table shown below, with the nine lunations. In the same way, the numerals are configured:



Maya Cultural Reunion: Testimony

It is appropriate to comment here that in the Dresden Codex, this way of counting time is encoded. No "mayista" had noticed this, because during their investigations they neither consulted nor learned the way of constructing the nine lunations from those who hold the dignity of ajq'ijab'.

Our grandmothers and grandfathers, in teaching us the cholq'ij, did so through a pedagogical dynamic of learning by exercising the legitimate tradition. For hundreds of years, they communicated what was treasured, without knowing about the existence and contents of the codices that were taken far from Mesoamerica.

In 1997, without working for any state institution, in my capacity as a researcher and K'iche' Maya ajq'ij, I was requested by the Government of the Republic to form the Commission for the Definition of Sacred Places, in compliance with the Peace Process Agreements.

The governmental part was composed of Archaeologist Juan Antonio Valdés Gómez, then director of the Institute of Anthropology and History; Lucía Barreda de Hurtado from INGUAT; Archaeologist and Architect Federico Fahsen Ortega, and myself.

On behalf of the Council of Organizations of the Maya People of Guatemala (COPMAGUA) were present: ajq'ij Pedro Ixchop, K'iche' Maya; ajq'ij Narciso Cojtí, Kaqchikel Maya; Demetrio López Leon, ajq'ij Achí Maya; Victor Lem Masc, ajq'ij Poqomchi' Maya. My dear friend and colleague, Federico Fahsen, gifted me a copy of the Dresden Codex with the following words: "Audelino, you will understand these contents better than I will". I felt out of place and ignorant because my colleague and friend is an architect, archaeologist, and university professor, while I am only an ajq'ij.

However, after long periods of observation, research, and comparison, I discovered that what my grandmothers and grandfathers had taught without knowing the codex was always there, the teachings of our people. I reconnected with the method of configuring the lunations by counting with the fingers and with Ri Mam or time bearers that we will explain in the Choltun.

As a tribute to the grandmothers and grandfathers, I present the fragment of the Dresden Codex, which shows in the central box two characters -ajq'ijab'- counting with their fingers and in the column of ideograms on the left side, the nawales B'atz', Kawoq, Aq'ab'al in sequences of nine and thirteen that, in tradition, when summed with the count of seven, account for the number twenty.

Interpreting the significance that each person attributes to the nawales is not a simple or mechanical act that can be written in a text. As we have explained, it is not a matter whose explanation can be found solely in the Western logic of rationality.

Mayan culture has prioritized sentiment and links it with reason. Hence, there is no singular interpretation, as it is an act that emanates from the perceptions of each ajq’ij. In this sense, it is counterproductive to make deterministic classifications about the meaning and application of each nawal. Therefore, if readers wish to delve deeper, they must internalize and seek the daily oral tradition of our grandmother and grandfather ajq’ijab’ from any Mayan linguistic community.

Below, the 20 nawales are illustrated, each with their nine lunations. Additionally, a brief description of their meanings, characteristics, and ideograms is provided, represented in two forms: in codices and in stone or wood carvings.

Graphic Representation of the Nine Lunations

B'ATZ'

Carving **Codex**

It means monkey or thread. It is the nawal of all the arts, of weaving, and of artists. It is an auspicious day to ask for a partner, to tie or untie any matter. They are masters of all the arts. Weavers and stitchers of things.

Basic natural traits:

Positive	Negative
Kind	Ambitious regarding houses, land, and goods
Reserved	Incredulous
Economically abundant	Strong and harsh character
Homely	Stingy
Family Protector	Easy to annoy, don't like to be bothered

Nine lunations of B'ATZ':

NO´J	AQ´AB´AL	TOJ
KAN	B´ATZ´	NO´J
AJ	KAWOQ	KAN

E

It means the path or tooth. It is the nawal of all paths and leaders, of the nervous and blood system. Auspicious day to start any trip or business. They are natural leaders.

Basic Natural Traits:

Positive	Negative
Promotes the well-being of others	Stubborn
Traveler and wanderer	Suffers internally
Speaker and thinker	Struggles with their own well-being
Generous	Impatient
Teaches others	Nervous

Nine Lunations of E:

TIJAX	K´AT	TZ´I´
KEMÉ	E	TIJAX
I´X	AJPÚ	KEMÉ

AJ

It means cane or sugarcane field. It is the nawal of the house and of children, an auspicious day for the home and the health of children, the nawal of tender generations. People who cannot say no to others.

Basic Natural Traits:

Positive	Negative
Sweet-natured	Jealous
Speakers and researchers	Destroys families
Protector of the house and family	Indecisive
Lucky in work and business	Orders others around
Respectful and Advising	Gossiping

Nine Lunations of AJ:

KAWOQ	KAN	B´ATZ´
KEEJ	AJ	KAWOQ
TZIKIN	IMOX	KEEJ

I´X

It means jaguar. It is the nawal of nature and the Maya altars, a day to ask for physical and mental strength. It is the nawal of the seven human shames: pride, ambition, envy, lies, crime, ingratitude, and ignorance due to laziness. Individuals under this nawal are introspective and have a love for nature and solitude.

Basic Natural Traits:

Positive	Negative
Brave and strong	Quick-tempered
Enterprising	Likes meat
Watchful	Indecisive
Lucky in work and business	Seeks fame
Respectful and Advising	Can cause deep hurt

Nine Lunations of I'X:

AJPÚ	KEMÉ	E
Q´ANIL	I´X	AJPÚ
AJMAQ	IQ´	Q´ANIL

TZIKIN

It means bird. It is the nawal of economic well-being, joy, and good fortune, an auspicious day to give thanks and ask for economic prosperity. It represents communication and mediation between “Uk’ux Kaj - Uk’ux Ulew” the heart of the sky and the heart of the earth. People under this nawal build their own well-being.

Basic Natural Traits:

Positive	Negative
Good luck for work	Obsessive
Integrity	Tempted by love affairs
Holy words	Stingy
Organized and methodical	Selfish
Self-taught teachers	Resentful

Nine Lunations of TZIKIN:

IMOX	KEEJ	AJ
TOJ	TZIKIN	IMOX
NO´J	AQ´AB´AL	TOJ

AJMAQ'

It means owl, fault, or guilt. It is the nawal of all faults, the day of the ancestors who are no longer present (deceased). It is the day to ask for forgiveness for one's mistakes. People under this nawal are brave and sweet-natured but can fall into guilt easily.

Basic Natural Traits:

Positive	Negative
Prudent and analytical	Hides their faults
Physically and spiritually balanced	Sinner
Wise	Destroys their inheritance
Well-liked by everyone	Can fall into vices
Perceives hidden energies that others cannot	Infamous

Nine Lunations of AJMAQ':

AQ´AB´AL	TOJ	TZIKIN
B´ATZ´	NO´J	AQ´AB´AL
KAWOQ	KAN	B´ATZ´

NO´J

It means idea, thought, wisdom. It is the nawal of intelligence, a day dedicated to asking for wisdom, talent, and good thoughts. It is the nawal of earthquakes or tremors. People under this nawal are very creative and imaginative.

Basic Natural Traits:

Positive	Negative
Good ideas	Imaginative
Brave	Incredulous
Ease of dialogue	Easily angered
Speakers and researchers	Adulterous
Intuitive	Lazy

Nine Lunations of NO'J:

AQ´AB´AL	TOJ	TZIKIN
B´ATZ´	NO´J	AQ´AB´AL
KAWOQ	KAN	B´ATZ´

TIJAX

It means flint or obsidian. It is the nawal of sudden death and suffering. It is an auspicious day for healers and authorities, a day to cut away sicknesses and evils. People under this nawal are confrontational and cut through all kinds of evils and problems.

Basic Natural Traits:

Positive	Negative
Appealing physical marks	Sharp and cutting
Healers	Suffer from gossip
Relate well with everyone	Suicidal
Negotiators and politicians	Insensitive to the suffering of others
Very friendly	Adulterous

Nine Lunations of TIJAX:

K´AT	TZ´I´	AJMAQ
E	TIJAX	K´AT
AJPÚ	KEMÉ	E

KAWOQ

It means thunder, difficulty. It is the nawal of all kinds of disputes; it is the day of the woman and a day to heal illnesses. It is the nawal of quartz stone and Tz'ité seeds. Creative people, defenders of women.

Basic Natural Traits:

Positive	Negative
Visionaries	Interfere where not wanted
Healers	Want to govern others
Inventors	Vindictive
Perceive signals in people's eyes	Gossipers
Good conversationalists	Confrontational

Nine Lunations of KAWOQ:

KAN	B´ATZ´	NO´J
AJ	KAWOQ	KAN
IMOX	KEEJ	AJ

AJPÚ

It means blowgunner, principal lord. It is the nawal of the sun, a day to ask for wisdom, talent, and physical strength. It is the nawal of flowers, music, sports, hunters, and agriculture. Individuals under this nawal are leaders and selective, seeking their own benefit first.

Basic Natural Traits:

Positive	Negative
They overcome all evil	Critical
Healers with plants	Vindictive
Leaders of groups	Do not share their space with anyone
Material well-being	Argumentative
Possess wisdom and physical strength	Arrogant

Nine Lunations of AJPÚ

KEMÉ	E	TIJAX
I´X	AJPÚ	KEMÉ
IQ´	Q´ANIL	I´X

IMOX

It means fish, madness. The left side. It is the nawal of the sea, rivers, and lakes, a day to heal mental illnesses, to give thanks and ask for rain. The nawal of all places where water is found. It is not the concept of madness we commonly know; it is the ability to feel what others do not feel, which is why they are said to speak madness. Excellent people for supporting work, they are the ones who do the work for others.

Basic Natural Traits:

Positive	Negative
Invisible strength	Forgetful
Intelligence	Suffer for everything
Logical articulation	Indecisive
Help others	Obsessive
Clean-hearted	Madness

Nine Lunations of IMOX:

KEEJ	AJ	KAWOQ
TZIKIN	IMOX	KEEJ
AQ´AB´AL	TOJ	TZIKIN

IQ'

It means wind, moon. It is the nawal of air and the moon, of the spirit of human beings. It is a day to ward off bad energies and illnesses. It is the wind that cleanses our home and our body. Noble people who easily get involved in the problems of others. They come and go from one place to another, like the wind.

Basic Natural Traits:

Positive	Negative
Healers	Destroy their home
Traders, organize things	Contact negative energies
Reach their goals	Domineering
Intelligent	Do not manage their expenses
Dreamers	Confrontational

Nine Lunations of IQ':

Q´ANIL	I´X	AJPÚ
AJMAQ	IQ´	Q´ANIL
K´AT	TZ´I´	AJMAQ

AQ'AB'AL

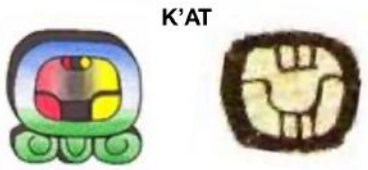
It means dawn, aurora, and hand. It is the nawal of clarity, a day to ask for the light to come out in all things. The day of the people who compose the bones of the sick. Healers with plants. People who fulfill their commitments.

Basic Natural Traits:

Positive	Negative
Punctual	Resentful
Responsible	Stubborn
Healers	Treacherous
Give ideas to others	Prone to vices
Loving and discreet	Only they want to shine

Nine Lunations of AQ'AB'AL:

TOJ	TZIKIN	IMOX
NO´J	AQ´AB´AL	TOJ
KAN	B´ATZ´	NO´J



It means net, captivity, iguana. It is the nawal of visible and invisible prisons. It is a keeper. It represents the net where corn is stored and where fish are caught. It is a day to ask for those who are imprisoned, to entangle and untangle things. It is the day of the ajq'ijab'. People with a lot of fire in their being. They handle positive and negative energies.

Basic Natural Traits:

Positive	Negative
Burners of pom and copal	Angry
Researchers	Rebellious
Self-taught	Lazy
Fishermen of all things	Destroy their peers
They always achieve things	Arrogant

Nine Lunations of K'AT:

TZ´I´	AJMAQ	IQ´
TIJAX	K´AT	TZ´I´
KEMÉ	E	TIJAX

It means feathered serpent. It is the nawal of the creation of man and woman. It is the owner of all material things. A day to ask for solutions to all kinds of problems and needs. People with a high sense of loyalty.

Basic Natural Traits:

Positive	Negative
Have powers	Disorganized
Good teachers and students	Always want to be right
Wisdom	Can harm with their mind
Material well-being	Possessive
Philosophers	Spend what they have

Nine Lunations of KAN:

B´ATZ´	NO´J	AQ´AB´AL
KAWOQ	KAN	B´ATZ´
KEEJ	AJ	KAWOQ

KEMÉ

It means renewal, death, the owner of darkness. It is the nawal of all kinds of deaths, a day to ask for death to be kept away. One asks for the rest and peace of a dying person. Death is not bad; it is renewal, the complement of life, the rest. It is the day to remove negative energies in people. People with skills for the arts and crafts.

Basic Natural Traits:

Positive	Negative
Psychologists	Vindictive
Responsible	Suicidal
Forecasters	Critical
Cunning, intelligence	Drain energy from people
Spiritual	Violent

Nine Lunations of KEMÉ:

E	TIJAX	K´AT
AJPÚ	KEMÉ	E
Q´ANIL	I´X	AJPÚ

It means deer. It is the authority of the community. It is the nawal of all kinds of four-legged animals. A day to ask for strength to bear our sorrows and joys. Nawal of the four corners of the universe and four corners of the world. Day of the Ajq'ijab' or Maya priests. People under this nawal are leaders, dominant with their partners, and they like fame.

Basic Natural Traits:

Positive	Negative
Good defender of others	Cannot defend themselves
Economic well-being	Exploitative
Hardworking	Angry
Responsible	Like luxury
Follow the rules	Manipulative

Nine Lunations of KEEJ:

AJ	KAWOQ	KAN
IMOX	KEEJ	AJ
TOJ	TZIKIN	IMOX

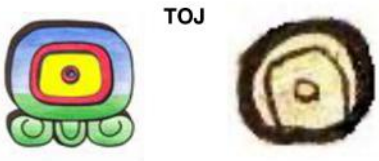
It means seed, sowing, rabbit. The planet Venus. It is the nawal of all kinds of animal and plant seeds. A day of fertility and harvests, suitable for starting any planting or business. It signifies the four colors of corn: red, black, white, and yellow. People with "warm hands" to whom everything they plant flourishes.

Basic Natural Traits:

Positive	Negative
Agile	Arrogant
Highly Fertile	Self-serving
Psychologists	Proud and selfish
Traders	Destroy their home
Good-natured	Incredulous

Nine Lunations of Q'ANIL:

I´X	AJPÚ	KEMÉ
IQ´	Q´ANIL	I´X
TZ´I´	AJMAQ	IQ´



It means offering, payment, and rain. It is the nawal of the four lords of the fire, Tojil, Awilix, Jakawitz', and Mikajtakaj. A suitable day to balance or pay any debt, and to give thanks for everything we receive in our life, both good and bad. People under this nawal have a high sensitivity for the arts and tend to cry easily.

Basic Natural Traits:

Positive	Negative
Accomplished in everything	Destructive
Accumulate wealth	Lazy
Perceptive of things	Indecisive
Intermediaries	Healers
Respectful	Given to pleasures

Nine Lunations of TOJ:

TZIKIN	IMOX	KEEJ
AQ´AB´AL	TOJ	TZIKIN
B´ATZ´	NO´J	AQ´AB´AL

It means dog, raccoon. (Some elders also say it is tz'ij = word.) It is the nawal of justice, material and spiritual authority, and order. It is a day to ask for solutions to problems before the courts and to stay away from vices. These are the people who speak on behalf of others. They are the owners of the laws and judge others.

Basic Natural Traits:

Positive	Negative
Natural leaders	Confrontational
Lawyers and politicians	Incredulous
Eloquent speakers	Unfaithful
Achieve their goals	Prone to vices
Tireless researchers	Relentless judges

Nine Lunations of TZ'I':

AJMAQ	IQ´	Q´ANIL
K´AT	TZ´I´	AJMAQ
E	TIJAX	K´AT

To complete the study of personality according to the “nawales,” the “Ri mam” or year carrier must be added, which we will explain in the calendar wheel.

Calendar Wheel

In the Maya timekeeping system, the contribution made by the ancestors is important and notable. They fused the *cholq’ij* sacred or lunar calendar of 260 days with the *ab’* solar calendar of 365 days, symbolizing in time the complementarity of the feminine energy of the moon in the *cholq’ij* with the masculine energy of the sun represented in the *ab’*.

During a period of time representing 52 solar cycles of the *ab’* and 73 lunar cycles of the *cholq’ij*, 18,980 days pass. It is interesting to see that by dividing 52 by 20, you get 2.60 (days of the *cholq’ij*?), and by dividing 73 by 20, you get 3.65 (days of the *ab’*?). A simple way to graph these two calendars is with two wheels, one smaller wheel representing the 260 days of the *cholq’ij* and a larger wheel representing the 365 days of the *ab’*.

These wheels turn simultaneously, and for 52 cycles or solar years and 73 lunar cycles, no date is repeated with the same *nawal* and numeral of the *cholq’ij*, fused with a day and number from the *wynal* or months of the *ab’*.

The following diagram shows the logic of the simultaneous correlation between the 260-day and 365-day cycles. The chart exemplifies the fusion of both calendars during the month of February 2022:

DATE		DAY	NUMERAL	NAWAL	NUMERAL	MONTH
GREGORIAN			CHOLQ'IJ - SACRED		AB' - SOLAR	
1-feb	2022	Tuesday	5	TOJ	7	KUMK'U'
2-feb	2022	Wednesday	6	TZ'I'	8	KUMK'U'
3-feb	2022	Thursday	7	B'ATZ'	9	KUMK'U'
4-feb	2022	Friday	8	E	10	KUMK'U'
5-feb	2022	Saturday	9	AJ	11	KUMK'U'
6-feb	2022	Sunday	10	I'X	12	KUMK'U'
7-feb	2022	Monday	11	TZ'IKIN	13	KUMK'U'
8-feb	2022	Tuesday	12	AJMAQ	14	KUMK'U'
9-feb	2022	Wednesday	13	NO'J	15	KUMK'U'
10-feb	2022	Thursday	1	TIJAX	16	KUMK'U'
11-feb	2022	Friday	2	KAWOQ	17	KUMK'U'
12-feb	2022	Saturday	3	AJPU'	18	KUMK'U'
13-feb	2022	Sunday	4	IMOX	19	KUMK'U'
14-feb	2022	Monday	5	IQ'	0	WAYEB'
15-feb	2022	Tuesday	6	AQ'AB'AL	1	WAYEB'
16-feb	2022	Wednesday	7	K'AT	2	WAYEB'
17-feb	2022	Thursday	8	KAN	3	WAYEB'
18-feb	2022	Friday	9	KEME	4	WAYEB'
19-feb	2022	Saturday	10	KEEJ	0	POP
20-feb	2022	Sunday	11	Q'ANIL	1	POP
21-feb	2022	Monday	12	TOJ	2	POP
22-feb	2022	Tuesday	13	TZ'I'	3	POP
23-feb	2022	Wednesday	1	B'ATZ'	4	POP
24-feb	2022	Thursday	2	E	5	POP
25-feb	2022	Friday	3	AJ	6	POP
26-feb	2022	Saturday	4	I'X	7	POP
27-feb	2022	Sunday	5	TZ'IKIN	8	POP
28-feb	2022	Monday	6	AJMAQ	9	POP

The main feature of the Calendar Wheel lies in the date on which the so-called awas q'ij or wayeb' of five days ends and the beginning of a new cycle of the ab', that is, the 365 days.

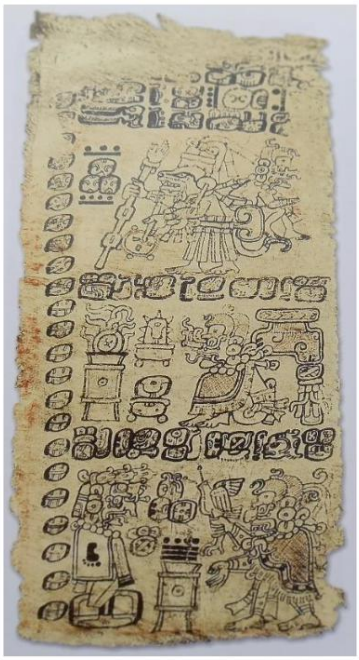
The start of a new ab' coincides with one of the four nawales of the cholq'ij identified as ri mam, also called the carriers of Maya time. These nawales are: e, no'j, iq', and keej, and during the 18,980 days, each of these carrier nawales goes through the numerical scale from one to thirteen. In the previous chart with a yellow background between February 14 and 18, 2022, it will be the awas q'ij or wayeb', and on Saturday, February 19, with a red background, the ab' solar calendar begins a new cycle with wai'x -zero- pop, the cholq'ij establishes the new ri mam or carrier with lajuj -ten- keej.

In contrast to the K'iche' Maya region, some Maya linguistic communities begin the count forty days later.

The calendar wheel establishes a sequence with the 4 nawales and the numerical scale from one to thirteen (1 to 13). The following chart shows the order of the carriers, the numerical scale, the year, and the date on which each carrier is "established," from the year 2020 to the year 2050:

2020	20-feb	8	NOJ
2021	19-feb	9	IQ'
2022	19-feb	10	KEEJ
2023	19-feb	11	E
2024	19-feb	12	NOJ
2025	18-feb	13	IQ'
2026	18-feb	1	KEEJ
2027	18-feb	2	E
2028	18-feb	3	NOJ
2029	17-feb	4	IQ'
2030	17-feb	5	KEEJ
2031	17-feb	6	E
2032	17-feb	7	NOJ
2033	16-feb	8	IQ'
2034	16-feb	9	KEEJ
2035	16-feb	10	E
2036	16-feb	11	NOJ
2037	15-feb	12	IQ'
2038	15-feb	13	KEEJ
2039	15-feb	1	E
2040	15-feb	2	NOJ
2041	14-feb	3	IQ'
2042	14-feb	4	KEEJ
2043	14-feb	5	E
2044	14-feb	6	NOJ
2045	13-feb	7	IQ'
2046	13-feb	8	KEEJ
2047	13-feb	9	E
2048	13-feb	10	NOJ
2049	12-feb	11	IQ'
2050	12-feb	12	KEEJ

The re-encounter with the Dresden Codex mentioned earlier also involved identifying on its pages what can be considered the images of Ri Mam or time carriers on pages 25, 26, 27, and 28, which are presented below, with the note that many researchers today use this interpretation of the images with the so-called time carriers.



Ri Mam E Page 25 Dresden Codex (left) Ri Mam No'J Page 26 Dresden Codex (right)

Ri Mam Iq' Page 27 Dresden Codex (left) Ri Mam Keej Page 28 Dresden Codex (right)

Choltun - Long or Infinite Count

It is estimated that this method of timekeeping is the least known among contemporary Mayans. This means that the ajq'ijab' (Mayan spiritual guides) considered part of the "pure tradition" have learned this form solely through oral transmission within families and communities, without any documentary or visual supports of the *ab'*, *cholq'ij*, the calendar wheel, and especially the *choltun*.

It should be noted that the *choltun* is composed of cycles of 360 days, which is different from the *ab'*, which consists of 365 days. This difference causes confusion for those who are beginning to learn the methods of Maya timekeeping. For this reason, in the year 2012, a series of incorrect interpretations about the *oxlajuj b'aqtun* emerged. According to some people, these misinterpretations incorrectly predicted the end of the world, claiming that the Maya had prophesied it.

Most of what is currently known about the *choltun* has been researched, systematized, documented, and taught by scholars trained in the so-called Western and Eurocentric academy, generally foreigners.

The anthropologists, archaeologists, ethnographers, sociologists, and linguists mentioned have been teachers and trainers of a generation of scholars who, with theoretical rudiments, methods, research structures, and often culturally conditioned by their own worldview, philosophy, and religion, interpret and argue explanations of the lost Mayan knowledge of the *choltun*.

In correspondence with the above, the configuration of the choltun is presented, highlighting the use of jun winaq (the number twenty) as the base and multiple for constructing the infinite count, following the logic of the Mayan numeration and mathematical system. The following table and subsequent graphics show each unit of time measurement and the manner of its graphical representation:

Days		Days			YEARS OF 360 DAYS
1	X	1	1	Q´IJ	
1	X	20	20	WINAL	
20	X	18	360	TUN	1
360	X	20	7200	KATUN	20
7200	X	20	144000	B´AQTUN	400
144000	X	20	2880000	PIKTUN	8000
2880000	X	20	57600000	KALAB´TUN	160000
57600000	X	20	1152000000	KINCHILTUN	3200000
1152000000	X	20	23040000000	ALAUTUN	64000000

Oxlajuj	13	B´aqtun	Number of years - 360 Days	**5200**
Oxlajuj	13	B´aqtun	Number of Katun - 20 Years	**260**
Oxlajuj	13	B´aqtun	Number of days elapsed	**1872000**

An example of how to graph dates in the Chultun is the data of the Oxjauj B'aqtun, corresponding to December 21, 2012, presented below:

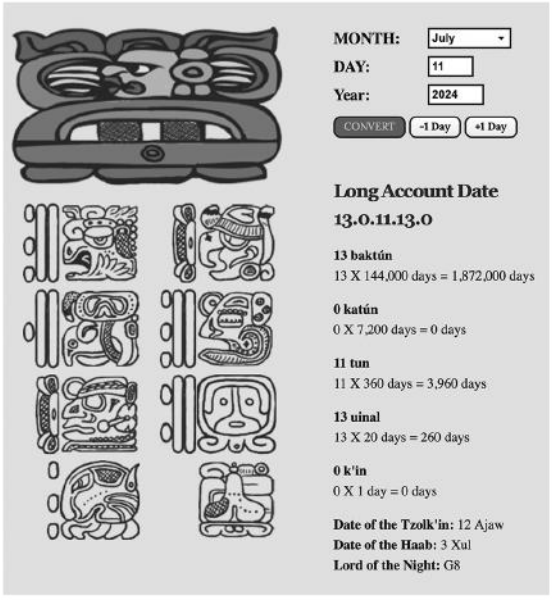


Image taken from: Smithsonian National Museum of the American Indian https://maya.nmai.si.edu/calendario/maya-calendar-converter.

Meaning of the Maya Counts

An attempt has been made to approach the function of each method of Mayan timekeeping, based on what is currently transmitted through oral tradition by the ajq'ijab'.

Ab' is perceived as a system for recording the minor cycles of the Earth, based on its orbit around the sun. These records allowed for the establishment of favourable periods for human life in harmony with Nan Ulew, Mother Earth, and the ecosystem. This meant understanding small climatic cycles such as rainy seasons, drought periods, times of wind, cold, heat, and others, during the 365 days that the ab' lasts, particularly for maize cultivation. It designates five days for the introspection, harmonisation, and purification of individuals.

The cholq'ij is proposed as an instrument to understand the influence that the stars, particularly the moon, have on the environment and the development of people's psyche. In this method of timekeeping, specific days were established for certain activities such as the collection of medicinal plants, cutting trees to ensure the wood is more durable, and understanding the basic talents and weaknesses of human beings. This knowledge allows for guidance from their nawal, aiding in the formation of individuals who are useful and harmonious with themselves, their families, and society.

The Calendar Wheel allows for the understanding of energy cycles and their influence on the environment, according to the energy of Ri Mam or the time carrier in each cycle, corresponding to each of the nawales: e – no'j – iq' – keej.

Choltun – Instrument that records natural phenomena and changes the planet undergoes during long and cyclical temporalities, which generally do not repeat within the same generation, but rather over extensive temporalities understood in our non-linear vision. We understand then, that what exists today also existed in the distant past and will exist again in the distant future. For example, the influence of the sun, with its varying heat and radiation, correlates with people's temperament. Similarly, the relationships of the orbits of other planets, as if forming a network, connect with the Earth, linking the physical and psychological changes that allow human beings to experience a reticular type of existence. Everything is interconnected; no one escapes this immense galactic horizon.

The Alq'ijab'

The women and men who have undertaken the cultural commitment to count time are called Ajq'ij in the K'iche' Maya language. Etymologically, "Aj" means work or profession, and "Q'ij" denotes sun or day. In simple translation, it is understood as: "one whose profession, mission, vocation, or work is to count the days and the suns". The plural of ajq'ij is ajq'ijab', so it is correct to say one ajq'ij, but when referring to three or four, the term ajq'ijab' is used.

The ajq'ijab' know the meaning of each nawal or energy of the day and the influence of the numerals, as well as their application in personal and collective life. Furthermore, they are the ones who have preserved, practiced, and communicated the cosmogonic exercise, in terms of a network, connecting human beings with nan ulew, Mother Earth or nature - ecological consciousness - and uwach ukaj or the face of the sky - astronomy.

They are people, both women and men, who practice the virtue of counting time and guiding the population; they are cultural counselors or psychologists. Their word, feeling, intuition, knowledge, experience, and wisdom have been cultivated in oral tradition with human simplicity. Their authority carries moral relevance and rests on the recognition and acceptance of society. If society chooses, it acknowledges and seeks them, or they dedicate "their mission" solely within the family circle. Moreover, to live, they must work like everyone else, as there is no hierarchical structure that obliges the population to support them.

After having undergone an extensive mentoring process, which can last many years in the *xukulem* - ceremonies - with elders walking and visiting the *tab'al* - sacred or enchanted places - they differ from other members of the community only by the use of the *Sut Rejolomaj*, a ceremonial cloth that covers their head, and the *Le Pas*, a red band or ribbon that ties around their waist. Both of these balance their energies during ceremonies. The *Sut Rejolomaj* represents the four corners of the universe and the four corners of the world - internal and external. The *Le Pas* is an analogy for the feathered serpent, or Q'uq' Kumatz. -Q'uq': quetzal, Kumatz: serpent - which symbolizes the thread of life and time. It is red because, in Mayan philosophical thought, it represents energy, clarity, strength, and life.

In the celebration of the day wajxaq'ib' B'atz' of each Cholq'ij, in the K'iche' Maya territory, a new sacred cycle or count of lunar time -of feminine energy- begins, and it is when, as from ancient times, women and men who have completed the path of their formation are presented and receive their Patán or Pizom Q'aq'al -sacred bundle- also known as "Vara". There are various ways to "make the path"

or the training of new ajq'ijab' according to the criteria, "feeling" or "intuition" of the elder trainers.

To a recent past, and as a result of prejudices, fanaticisms, and religious fundamentalism—both Catholic and Protestant Evangelical—as well as academic ignorance, the ajq'ijab' were labeled as "witches" or demon summoners without understanding the "mission" or service they provide to the community. This stems from the condemnation, disqualification, and persecution by the doctrinary priests who came with the Spanish invasion, ignorant of the scientific content of the cosmogonic practices of the Maya culture.

Xukulem or Maya Ceremonies

Xukulem, Mejlem, or Kotzij, from the philosophical thought of the Maya culture, refers to one of the cosmogonic practices known as Maya ceremonies. Despite condemnation from various religious denominations and past persecution by the government, these ceremonies continue to be practiced today with courage and dignity by the Maya people.

Xukulem means – literally – to kneel, but this word must be understood from a deep and mystical philosophical conception. It does not solely refer to the physical act of kneeling, but also to the capacity of human thoughts and feelings to engage in a symbiotic exercise that links the energy the Maya call Ajaw – mother and father – with human beings, nature, and the cosmos.

Kotzij can be understood as a flower, because when offering those known as offerings or ceremonies, candles of the Maya colours – red, black, white, yellow – as well as blue and green candles, are offered along with aromatic elements such as copal, rax pom, pericón, and tobacco. When fused in the sacred fire, these elements transform words into spirals of smoke that elevate people's words and feelings, like the perfume of flowers offered to the universe.

Xukulem in Q'umarq'Qaj (left) Elements of the Xukulem (right)

Xukulem is, therefore, the act of tuning the heart, thoughts, and one's own energies from the nawal with that creative energy and the generative matter of life, of all the things we see, touch, and feel, and of all the things we have to live.

The identified places in nature, where the Xukulem is performed, are considered sacred and constitute physical spaces such as forests, volcanoes, hills, rivers, lakes, caves, and others, where cosmogonic practices of encountering specific energies or electromagnetic frequencies take place.

Moreover, these are places from where communication is "spoken" and exercised using delicate ceremonial language in harmony with the ancestors; it is the

connection with those who are no longer present. These places can be classified as personal, familial, and communal lineages, known as Warb'al Ja', Tab'al, or Enchanted places that relate Ajaw, with the cosmos, nature, and the ancestors.

One of the many invocations performed during the counting of time in ceremonial language, which has been resonating in these Mesoamerican lands for thousands of years, is transcribed. Our ancestors imparted this wonderful, mystical, and profoundly ecological discourse of respect and connection to reconnect with Nan Ulew, mother earth, the cosmos, and the environment:

"*Thank you, Loq'olaj Ajaw, infinite thanks to you, mother and father. U'kux Kaj U'kux Ulew... heart of the sky... heart of the earth...*

U'kux Cho' U'kux Palo'... heart of the fresh water... heart of the salt water... Lal Kaslemal... you, giver of life... Lal Kamikal... you, giver of death... Lal Kikitemal... you, giver of happiness.

SIB´LAJ Maltyox Nan Ulew... thank you, Mother Earth.

U Nawal Q'eq'iq... the nawal of the wind.

U Nawal Ik... the nawal of the moon.

U Nawal Ri q'ij... the nawal of the sun.

U nawal Ch'umil... the nawal of the stars.

U Nawal Juyub'... the nawal of the mountain.

Jumul... Kamul... Oxmul... Kajmul... Thank you, Great Lord, once... twice... three times, up to four times, thank you, Mother-Father."

Validity of the Maya Cosmovision and Time Count

The so-called "modernity," when viewed from the perspective of the Mayan cosmovision, has led to the loss or annulment of the fundamental values of human beings. The philosophical orientations of great civilizations propose the practice of behaviors and conducts that promote fraternal coexistence of human beings with their fellows, with the environment in which they live, and the ethical and moral commitment to allow the future existence of humanity.

The "modern" lifestyle has been supported by a narrow individualistic vision, one that is predatory towards nature and focused on the accumulation of material goods. In the past, this was achieved through the forceful invasion of territories. In the present, it occurs via cooperation programs that impose adverse views such as governance, women's empowerment, sexual health, and development, but always from a Western and Eurocentric perspective. Although these programs may be disguised with culturalist traits, they ultimately respond to geopolitical intentions of dominance and social control.

In these conditions, the Mayan culture has maintained, exercised, and transmitted the main elements of its own thought, despite being disqualified and undervalued at all levels of formal education, or presented in a fragmented and folkloric manner. Even so, it continues to constitute a valuable alternative for the construction of Utz' Kaslem, the good life.

Thinkers and academics from the so-called "first world" have begun to recognize the contributions that Indigenous cultures make to the life of the planet. An example of this recognition is expressed by the philosopher, political scientist, linguist, and American activist Noam Chomsky, who states: "The most advanced countries are leading the world towards disaster, while the peoples so far considered primitive are trying to save the entire planet, and unless the rich countries learn from the indigenous people, we are all doomed to destruction."

Therefore, the enduring relevance of the essential elements of the Mayan cosmovision outlined in this document becomes evident, as they promote the recognition of human beings as part of, and not masters and executioners of, nature. The defense of territory against extractivism, which degrades the environment and generates excessive wealth without benefiting the inhabitants who have lived there since time immemorial, is justified from a cultural perspective.

When attempting to compare it with what is called sustainable or durable development, the Mayan cosmovision offers important elements that are valid for the present, not only for the Mayans but for humans in general:

- Everything has life and must be respected.
- Recognition of the human being as part of the whole.
- A sense of belonging to the environment where one lives.
- The Nan Ulew, Mother Earth, is not merely a material resource.
- The sense of sacralizing nature, which promotes taking only what is necessary to live.
- The usefulness of the knowledge of nature's cycles in the Mayan calendars.
- The value of community sense and not individualism.
- The construction of Utz' Kaslem, the good life, with ancestral practices.

The strong presence, significance, and practice of Mayan elements in the present are perceived in the identity connection during different moments in the lives of contemporary Mayans, of which some are cited:

- Representative Maya, whose act of election and selection constitutes spaces for the formation, transmission, practice, and teaching of the Maya cosmovision and ways of counting time.
- Ancestral authorities, who exercise dialogue, political negotiation, decision-making, and actions based on the knowledge of the nawales of the Cholq'ij.
- Ancestral authorities, who exercise dialogue, political negotiation, decision-making, and actions based on the knowledge of the nawales of the Cholq'ij.
- Inter-religious dialogue, particularly in large Catholic celebrations, where openness and appreciation of Mayan cosmogonic symbols and practices are perceived. Very incipiently with some evangelical Protestant denominations.
- Ecological awareness and a healthy environment, through the practice of organic, sustainable agriculture and culture, and care for the environment based on the significance of each nawal.
- Return and identity reunion, of men and women who bravely embrace the full magnitude of Mayan values in social, economic, political, and academic life.
- Formation of committed human beings, based on the knowledge of the talents proposed by the knowledge of the influence of the Cholq'ij, for a formation that can be understood as "committed and responsible citizenship".

Maya Culture in Higher Guatemalan Education

As has been reflected upon, higher education or academia in Guatemala was designed and shaped from the dominant Spanish thought during the colonial period, and the study of the Maya cosmovision was not incorporated into its content.

Five centuries later, the knowledge of the Mayan culture continues to be practiced and has proven to be the means to sustain the life of the population, despite subjugation, aggression, exploitation, cultural appropriation, and attempts to homogenize all inhabitants of what is now Guatemala.

In universities, very few researchers originating from the Mesoamerican territory, where the Mayan civilization developed, have investigated from their own culture and the Mayan cosmovision. Generally, the reintegration of Mayan cultural knowledge that is presented and accepted in Guatemalan academia must be theoretically supported by the so-called Western, Eurocentric "scientific rigor."

Moreover, research that aims to transform indigenous knowledge into useful knowledge for the lives of people in their natural environment and social context is disqualified.

If in the past, attempts to elevate the knowledge of the Mayan culture to the level of "science" were discredited, in the present, little has been renewed in academia. There is also little interest in knowing and dignifying the set of alternatives for a full life that the Mayan culture offers, which faces what is known as epistemological extraction of original knowledge. Four positions of university professionals regarding the Mayan culture, who work as teachers and researchers in Guatemalan universities, can be perceived:

Ladino teachers, in the sense of the popular perception of the word, are those who investigate, document, write, teach, and present the Maya culture as "new knowledge" discovered by them, even claiming intellectual authorship without recognizing that their informational sources and teachers have been Maya sources. Most of these sources have not attended school yet practice cosmogonic traditions. It is estimated that the majority of professionals in this category fit this description.

Mestizo teachers seek current informational sources and testimonies within the population, outside the university. They value, recognize, and humbly learn because, deep down and after a process of internalization—sometimes painful—they recognize themselves as the denied mestizo part of the Maya culture. They contribute and help to build scientific scenarios to recognize the validity and

present utility of Maya knowledge and credit its keepers. This group is less numerous than the previous one.

Indigenous teachers, self-identified and recognized as such by others, are inserted into the university system according to the higher education structure they follow. They maintain and recognize some elements of Maya culture, such as clothing, gastronomy, and some traditions, but they are opposed to cosmogonic practices due to their status as Catholic or Evangelical Christians.

They recognize the scientific achievements of the Mayans in the past, but do not feel connected to the cultural thread of the Mayan civilization. They are intellectually colonized professionals and replicate the Eurocentric academic model. This group is numerous among those who have managed to attain a university degree.

Maya teachers managed to access higher education without renouncing their cultural identity; they learn and practice knowledge through oral traditions and participatory research, working alongside the elders from the original tradition to provide true meaning and scientific explanation. They value and strengthen the dignity of contemporary Mayans, are not ashamed of their origins, and teach Maya culture with clarity, dignity, and tenderness. This is a small but respected group, which has become a source of university consultation. They are the intellectual seed of the decolonization of Maya thought in the future academia.

Colophon or Epilogue

The Master's degree in Social Anthropology from the Department of Postgraduate Studies at the Centro Universitario de Occidente (CUNOC) of the Universidad de San Carlos de Guatemala (USAC) concluded in May 2021, during the coronavirus or COVID-19 pandemic, with the Maya Time Counters Updating Course.

It is imperative to provide an epitome of the history of this course, due to its significance for the encounter between academia and ancestral Maya knowledge and the new paths that will undoubtedly emerge from this effort—a glimmer of light, fresh air, and authenticity in higher education, brought forth by Mayan voices and the ajq'ijab' or time counters. Although this was not a course to train ajq'ijab', which is a lengthier and eminently Maya cultural process.

The course was designed and planned for 2020, initially to dignify the work of ajq'ijab' or Mayan time counters. It was intended to be conducted in-person, and participants did not need to present any credits to be accepted. This constituted an opportunity for people to participate in university classrooms, in a participatory manner and under equal conditions, to learn the ancestral knowledge about the Mayan time counts from practitioners and cultivators of this ancient science with full recognition and dignity.

The team of facilitator-teachers, endorsed by the coordinator of the Department of Postgraduate Studies, Doctor Percy Ivan Aguilar, was formed by: Maestro Moisés Gómez, Doctor Daniel Eduardo Matul Morales, Doctor Roney Alvarado Gamarro, Doctor David Marin, Maestra Ericka Vásquez Flores, and the author of this text. Due to the pandemic, the course was suspended and was thought to be resumed once the university activities started again. However, the country's shutdown, biosecurity protocols, and the shift to virtual learning led to new alternatives for the course. It was reconvened and conducted with the participation of both men and women, with or without postgraduate degrees. The only requirement was literacy, as cultural methodologies for the Mayan time count were exercised, with participants from Mesoamerica—Guatemala and Mexico—as well as Maya participants in France and the USA.

In a subsequent evaluation meeting, the coordinator of the Master's degree in Social Anthropology, Maestro Moisés Gómez, noted that elements of the Mayan oral tradition presented during the course and learned, practiced, and transmitted by the ajq'ijab' from the Mayan-K'iche' region of Xelajuj No'j Quetzaltenango have not been recorded. This document aims to recover, document, and present part of that knowledge as a contribution from the Postgraduate Studies Department of

the Centro Universitario de Occidente (CUNOC) of the Universidad de San Carlos de Guatemala, coordinated by Doctor Percy Aguilar.

Xelajuj No'j, Quetzaltenango. Julajuj Aj. - B'elejeb' K'at
Audelino Sac Coyoy
Ajq'ij Maya-K'iche'.

Sources of Inquiry

Sources of Consultation

Cultural Orality: Family, Community, Ethnic, Intergenerational, and Transgenerational. Mayan Culture: K'iche', Q'eqchi', Mam, and Kaqchikel of Guatemala.

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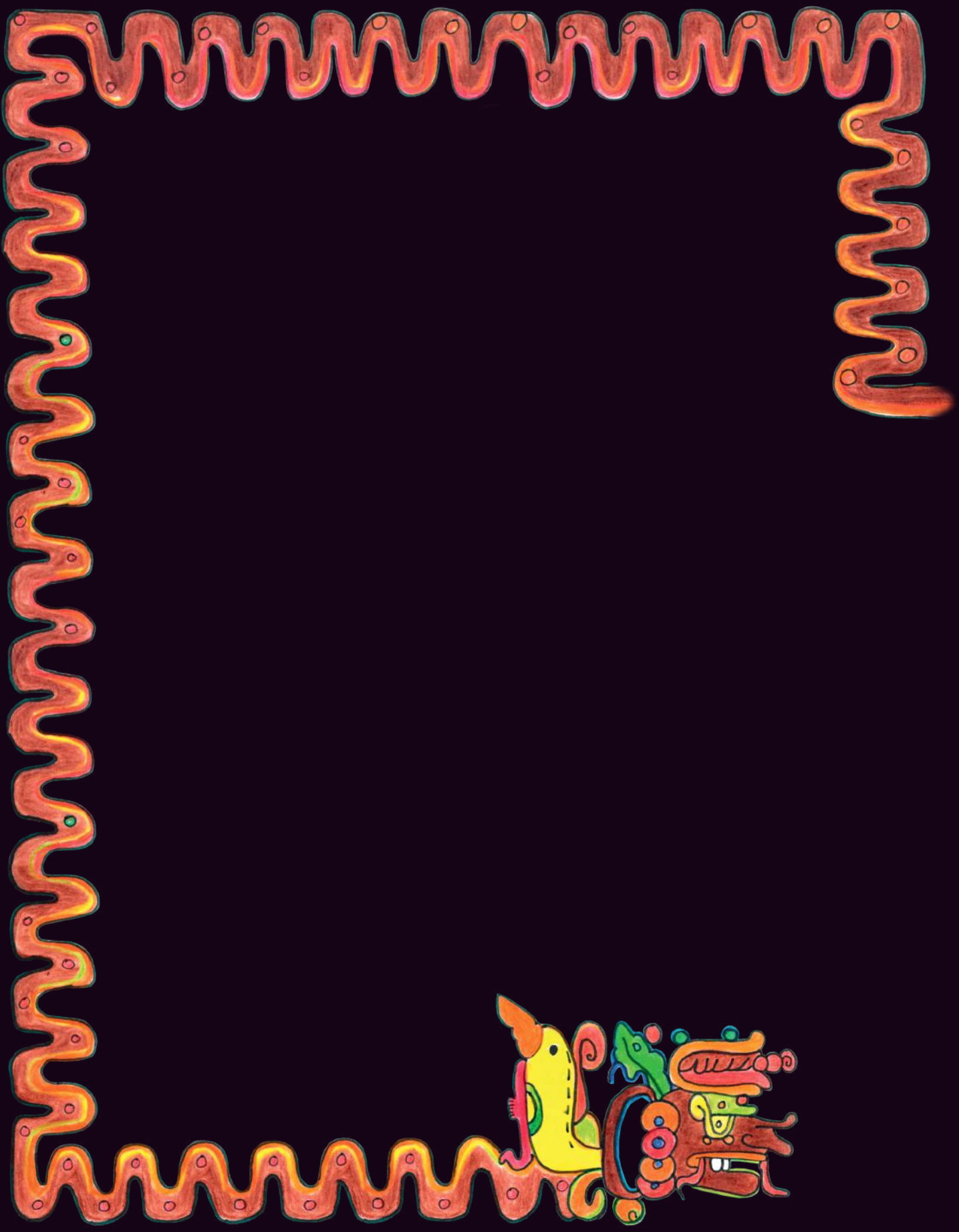
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